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APPENDIX

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1908

INTRODUCTION TO APPENDIX

THE necessity for reprinting the third volume of the Dictionary, caused by the continued demand for the work, has, through the liberality of the publishers, Messrs. Macmillan, allowed the opportunity for the addition of a short appendix. Fully fourteen years have elapsed since the publication of the first volume, while many more have passed since the foundations of the work were laid.

Meanwhile many changes have taken place in the Economic conditions of life in the United Kingdom and in our Colonies, especially among those which are self-governing. The power, the wealth, and the population of many foreign countries have greatly expanded during the same period. So far as space has permitted, I have endeavoured to chronicle the changes which have occurred. At no period of the history of the world has applied science done more to assist industry, to facilitate the means of communication, and to promote the developments of business than during recent years. Meanwhile the unprecedented addition to the stock of the precious metals has enlarged the medium for negociating the increased commercial exchanges resulting from the greater industrial activity.

Nor has the study of Economics stood still. While we still have to lament that it does not form a more serious part of the general education of the country, the development of Academic teaching has favoured the extension of the university system—principally in the North of England, the Midlands, and Wales, and in that system Economics has taken a definite place. The recognition of the importance of the study by the establishment of the new Tripos devoted to it at Cambridge and the corresponding Diploma at Oxford, with the work of the London School of Economics and our other Academic centres, is all encouraging. With this we may specially mention the Faculty of Commerce in the University of Birmingham. A remarkable proof of the hold which Economic Teaching has secured in that centre is shown by the establishment of the Advisory Board of Business men there, which marks a desire to join practical work with scientific study. The carrying out of this plan may be very useful for both sides. We have, however, still to regret that Economic training is at present extended only to a very small proportion of the rising youth of the country. The general teaching may be merely elementary, but it ought to be as useful as the grounding in first principles given in other branches of knowledge.

Together with the increase in the opportunities for instruction there has been a development of Economic Libraries. I have been able to collect some information about these both in the United Kingdom and elsewhere. The Free Libraries in our towns and larger industrial centres should encourage the growth of such collections. When united with statistics of local industries, the collection of which is best conducted on the spot, the volumes become more

interesting to the inhabitants, and should be useful towards obtaining the information desired for the Census of Production which has recently been established.

I have endeavoured to give some reference to subjects of the day—as of the slackening increase of population in some countries, the development of municipal and government trading, the tariff reform movement, the deliberations at the Hague Conferences, and the extension of Socialistic ideas. Among matters of domestic concern the greater enterprise shown by the Board of Trade gives hope that wider official assistance may be given to the industrial activity of the country, while the encouragement to the co-operation of Labour and Capital through the system of Copartnership commemorated in the following pages shows a valuable opening for improvement in the relations between employers and their work-people.

These points have throughout been dealt with as far as possible from the Economic and not from the political sides of the questions concerned.

Economic questions which affect the well-being of our people as much, perhaps more than any other social problems, require to be examined under the dry light of scientific research. It is impossible that such matters should receive due consideration when attempting to measure their importance in the midst of popular clamour.

In the notices of the lives of Economists, some have been commemorated whom we have lost since the last volume of the Dictionary was completed. In other cases an effort has been made to chronicle the work of the less known Economists of this country who laboured during the days when the teaching of Ricardo and James and John Stuart Mill was supreme, and who have been, in some instances, but imperfectly recognised, owing to the fact that their opinions were not in harmony with the orthodox teaching of the day. In arranging these I have had the assistance of Professor E. R. A. Seligman's papers "On some neglected British Economists" in the *Economic Journal*, London, 1903. Such scattered notices are almost the only recognition that many of these writers have received. Those who are interested in Economics have much for which to thank Professor Seligman. There is much work of the same class to be done, to which I trust our younger scholars will turn their attention.

In conclusion, while expressing my sorrow that so many of my old friends whose kind assistance was of great service to me in my earlier volumes have passed away, I am thankful that many still remain. From these I have received much valuable help, which, with the welcome aid of fresh contributors, will, I trust, render this work of service to those interested in Economic Study.

R. H. INGLIS PALGRAVE.

HENSTEAD HALL,
WRENTHAM, SUFFOLK,
Easter 1908.

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APPENDIX

ACCOUNTANCY—ALIEN IMMIGRATION

ACCOUNTANCY. See COMMERCE, FACULTY OF, IN THE UNIVERSITY OF BIRMINGHAM, Appendix.

ADVISORY BOARD OF BUSINESS MEN. See COMMERCE, FACULTY OF, IN THE UNIVERSITY OF BIRMINGHAM, Appendix.

AGRICULTURAL HOLDINGS ACTS. The Agricultural Holdings Act, 1883, was extended with some slight modifications in favour of the tenant to market gardens by the Market Gardeners' Compensation Act, 1895, and market gardeners may now obtain compensation for improvements made by them during their tenancy, and are otherwise entitled to the benefits of the principal Act. By the Agricultural Holdings Act, 1900, provision was made for the assessment of compensation by arbitration.

The Agricultural Holdings Act, 1906, which does not come into force until Jan. 1, 1909, makes some serious changes in the law. Its principal provisions fall under three heads: (*a*) game; (*b*) cropping and disposal of produce; (*c*) compensation for unreasonable disturbance.

(*a*) A tenant who has sustained damage to his crop from game is entitled to recover from his landlord compensation for such damage, if it exceeds the sum of one shilling per acre of the area over which such damage extends. Any agreement negativing the right to compensation or limiting its amount is void.

(*b*) Notwithstanding any custom of the country, or any agreement to the contrary, a tenant is entitled to practise any system of cropping of the arable land on his holding, and to dispose of the produce of his holding in such manner as he thinks fit. The tenant is bound, however, to exercise his rights so as not to deteriorate the holding in any way, and during the last year of his tenancy he must comply with the custom of the country or the terms of his agreement.

(*c*) The right of a tenant to recover compensation from his landlord for expenses incurred by him on quitting his holding is extremely limited. The amount recoverable is confined to the direct loss unavoidably incurred in connection with the sale or removal by the tenant of his household goods, farm stock, and implements of husbandry. Further, the tenant has no right to recover any compensation except where the landlord has given notice to quit, or has refused to renew, without good and sufficient cause, and for reasons inconsistent with good estate management, or where the landlord has demanded an increased rent on account of improvements executed by the tenant, for which the tenant is not entitled to recover compensation, and the tenant has quitted his holding by reason of such demand. The right of the tenant cannot be excluded by agreement. The onus of proving that a claim to compensation has arisen falls on the tenant, and the nature of the facts to be proved will render it extremely difficult, if not impossible, for him to establish his claim.

The Agricultural Holdings Acts, 1900 and 1907, and the Market Gardeners' Compensation Act, 1895, apply to Scotland. A. A, U.

ALIEN IMMIGRATION. By the Aliens Act, 1905, it is enacted that no "immigrant" as defined in the Act shall be landed in the United Kingdom from an "immigrant ship" (also there defined), except at a port at which there is an immigration officer appointed under the Act, or shall be landed at any such port without the leave of that officer given after an inspection of the immigrants made by him on the ship, and that the immigration officer shall withhold leave in the case of any immigrant who appears to him to be an "undesirable immigrant," as therein defined; but that the Secretary of State for the Home Department may, subject to such conditions as he thinks fit to impose, make "exemption orders," relieving particular immigrant ships from the above-mentioned provisions, if he is satisfied that a proper system is being maintained for preventing the embarkation of undesirable immigrants on these ships, or if security is given to his satisfaction that undesirable immigrants will not be landed in the United Kingdom from those ships except for the purpose of transit; and he may also, if he thinks fit, make "expulsion orders," requiring particular aliens to leave

the United Kingdom within a time fixed by the order, and thereafter to remain out of the United Kingdom on certain prescribed facts being proved in a certain prescribed manner. The expression "immigrant" is defined as meaning an alien steerage passenger (not being a "transmigrant"), who is to be landed in the United Kingdom, and the expression "steerage passenger" as including all passengers except such persons as may be declared by the Secretary of State to be "cabin passengers," by order made either generally or as regards any special ships or ports. Pursuant to the Act, the Secretary of State has made numerous exemption orders relieving second-class passengers from inspection, upon the shipowners giving security by bond not to land any undesirable immigrants from among such passengers, and has also made a general order declaring all such passengers as are entitled to use the cabins, state-rooms, or saloons, where the accommodation is superior to that provided in any other part of the ship devoted to the carrying of passengers, to be cabin passengers for the purposes of the Act (Aliens Act, 1905). It appears from the parliamentary return showing the result of the first year's working of the Act, that for the twelve months ending 31st December 1906, out of a total of 465,500 alien passengers, 493 were finally refused leave to land, and expulsion orders were made in 287 other cases. And it appears from the first annual report of H.M. Inspector under the Act that, after making the necessary deductions for cabin passengers, exempted second-class passengers, transmigrants, and others who are not within the Act, only 38,527 of the 465,500 alien passengers are left unaccounted for. Of these, 22,986 were males, 11,049 females, and 4492 children. Russians and Poles numbered 12,832; French, 10,116; Italians, 5360; Germans, 3186; Norwegians, Swedes, and Danes, 1295; Austrians, Hungarians, and Bohemians, 1223; Swiss, 983; Dutch, 798; Spaniards and Portuguese, 572; Americans (U.S.), 552; Belgians, 380; and other nationalities, 1230. The total number of aliens who received Poor Law relief during 1906 in London and certain provincial unions was 6050, and the number sent to lunatic asylums was 266. As pointed out in the report, the statistics of convicted prisoners already yield indications that the liability to expulsion created by the Act is exercising considerable influence. For the alien prison population, which had reached its highest point in 1904, having increased ever since 1893, and at a greater rate than the total prison population, suddenly dropped in 1905 by 7·01 as compared with a fall of only 1·12 per cent in the total number of prisoners, and this change, which is suggested to have been due to the shadow of the coming Aliens Act, was continued and accelerated in 1906, the first year of the operation of the Act, when the total number of convicted persons received into prison fell by 6·32 per cent, while the number of aliens among them fell by 16·85 per cent, leaving the proportion of aliens to the total number at 1·85 per cent, the lowest figure since 1899. (*Aliens Act, 1905, First Annual Report of H.M. Inspector under the Act, c. 3473.*) (*Parl. Papers, c. 3316 of 1907.*)

T. G. S.

AUTUMNAL DRAIN. In continuation of the statement contained in vol. i. of this Dictionary, the table which follows shows that the movement of coin there mentioned continues, and on the whole increases in amount:—

Beginning of September to about middle of November, years 1901-06.

(000's omitted.)

Year.	Gold Coin.							Silver Coin.	
	Received from or taken for abroad on balance.		Taken for Scotland on balance.	Taken for Ireland on balance.	Received from or taken for home circulation on balance.		Total Decrease.	Increase.	Decrease.
		£	£	£	£	£	£	£	£
1901	..	2237	342	65	27	..	2617	222	..
1902	..	3714	772	525	350	..	4661	49	..
1903	..	3796	570	115	542	..	3939	..	51
1904	..	2933	480	210	..	451	4074	..	35
1905	..	5517	550	170	60	..	6177	..	33
1906	..	5648	482	350	778	..	5702	..	135

BANK OF ENGLAND, 13*th March* 1907.

In connection with this subject, the estimate made by the Deputy-Master of the Mint as to the extent to which the summer holidays affected the transfer of silver coin from one locality to another, should be mentioned. In order to see how far the summer holidays affected the transfer of silver coin from one locality to another, he obtained through the Central Association of Bankers a return showing the amount of silver coin held by banks in the United Kingdom on September 30, 1905. The returns showed that on the latter date the amount held by banks in England was some £660,000, and by banks in Wales some £21,000 less than on the 30th June, whereas Scotland showed an increase of £26,000, and Ireland remained practically the same.

The following table shows the distribution of silver amongst banks on the two dates in 1905:—

Date.	London.	England.	Wales.	Scotland.	Ireland.
	£	£	£	£	£
June 30	1,490,926	2,389,601	153,016	735,[illegible]	506,821
Sept. 30	1,195,331	2,019,062	131,728	761,484	508,437

[*Thirty-Sixth Annual Report of the Deputy-Master and Comptroller of the Mint, 1905*, p. 15.]

It appears thus that about £680,000 was withdrawn from the banks in England and Wales to meet the requirements of the holiday season. The greater part of these figures must be taken into consideration with those included in the autumnal drain.

The rate of discount charged by the Bank of England was raised in the period of the year affected by the movement described in this table in five out of the six years covered by it. The dates are as follows:—

Dates.	Bank Rate.	Dates.	Bank Rate.	Dates.	Bank Rate.
1901. Jan. 3	5	1903. May 21	3½	1906. April 4	3½
,, Feb. 7	4½	,, June 18	3	,, May 2	4
,, ,, 21	4	,, Sept. 3	4	,, June 20	3½
,, June 6	3½			,, Sept. 13	4
,, ,, 13	3	1904. April 14	3½	,, Oct. 11	5
,, Oct. 31	4	,, ,, 21	3	,, ,, 19	6
1902. Jan. 23	3½	1905. Mar. 9	2½		
,, Feb. 6	3	,, Sept. 7	3		
,, Oct. 2	4	,, ,, 28	4		

Although one cannot ascribe the whole of the influence which caused the rate to be raised at the dates given to this drain of specie, it is obviously a point to be reckoned with. The movements of silver coin are very considerable. "The returns for the 30th June, 1906, showed that on that date the banks in the United Kingdom (excluding the Isle of Man and the Channel Islands) held £4,713,233 as against £5,275,894 in 1905. The large difference may be attributed to the activity of trade which had correspondingly increased the amount held by the public" (*Thirty-Seventh Ann. Rep. of the Mint, 1906*, p. 12).

The following table recapitulates the distribution on the 30th June 1905 and 1906:—

Year.	London.	England.	Wales.	Scotland.	Ireland.
	£	£	£	£	£
1905	1,490,926	2,389,601	153,016	735,530	506,821
1906	1,429,091	2,026,478	125,901	671,780	459,983

AVERAGE, UNWEIGHTED. See AVERAGE, WEIGHTED.

AVERAGE, WEIGHTED, (in Statistics). When we seek to take an average of a number of figures, it is frequently the case that the importance attached to the different figures ought not to be the same throughout, but that some of them ought to be *weighted* relatively to others. Suppose, for example, that in a given market the price of corn on one day is thirty-two shillings, and on the following day thirty-six shillings a quarter, but that the amount of corn bought and sold on the first day is three times as much as on the second. Then, if we consider simply the prices, the average for the two days will be thirty-four shillings; while, if we also take into account the amount sold, the average will be thirty-three shillings. The former is the *unweighted average*, the latter the *weighted average*; and the latter will for most purposes have the greater utility. An important case in which a weighted average is desirable is in the construction of an index-number for measuring changes in the purchasing power of money. It is clear that, if we wish to measure the value of money for the average consumer, a commodity which is in general consumption in large quantities should have greater weight attached to it than one which is consumed by certain classes of the community only, and by them perhaps in small quantities.

[See INDEX NUMBERS, and cf. Bowley, *Elements of Statistics*, pp. 111-118.]

BAUDRILLART, HENRI JOSEPH LÉON (1821-1892), was in 1852 appointed deputy professor to Michel CHEVALIER in the Collège de France; in 1866 he was called to the chair of history of economic doctrines in the same *collège*. He was also Professor of Political Economy in the *École des ponts et chaussées* and a member of the *Académie des sciences morales et politiques*.

An untiring and well-informed investigator of historical, philosophical, and economic matters, it may be said that as an economist his ruling preoccupation has been to demonstrate that no contradiction exists between the doctrines of the liberal school, to which he belonged, and the rules of conduct as laid down by moral science. These views he already defended in one of his first and principal works, *Les Rapports de la morale et de l'économie politique* (Paris, 1860), and thirty years later, in the article "Morale" which he contributed to Léon Say's *Nouveau Dictionnaire d'économie politique* (1892).

The first book, by which he attracted the notice of learned circles, is his volume on *Jean Bodin et son temps; tableau des théories politiques et des idées économiques au seizième siècle* (Paris, 1853), describing after an introduction on the leading economic and political ideas of the period, the life and writings of Bodin, and giving a full analysis with commentaries of his *République*. It remains the standard book on the subject.

Baudrillart's *Histoire du luxe public et privé depuis l'antiquité jusqu'à nos jours* (Paris, 4 vols., 1878 and 1880) is another outcome of his favourite studies on the reciprocal influences having existed and existing between ethics and social economics; it is a sort of encyclopedic and historical account of the character of public and private luxury from the dawn of history to our own times.

The three volumes of his *Populations agricoles de la France* (Paris, 1880 to 1893) were written as the report of an extensive inquiry entrusted to his

care by the *Académie des sciences morales et politiques*. The first volume comprises Normandy and Brittany; the second Maine, Anjou, Touraine, Poitou, the country around Paris, Picardy, and Artois; the third volume on Central France was published by his son after his death, and is in fact as much the work of the son as of the father. The object of his inquiry was, not cultivation itself, but the moral and material situation of the agricultural populations; to reach his aim, he combined direct observations of the present with the study of the past.

Baudrillart was also a frequent contributor to the *Journal des économistes*, to the *Revue des deux mondes*, and to Franck's *Dictionnaire des sciences philosophiques*. Besides the four large works mentioned above, he published: *Manuel d'économie politique* (1857); *Études de philosophie morale et d'économie politique* (1857); *Publicistes modernes* (1862); *La liberté du travail, l'association et la démocratie* (1865); *Éléments d'économie rurale, industrielle et commerciale* (1867); *Économie politique populaire* (1869); *La famille et l'education en France* (1874). E. Ca.

BILLS OF EXCHANGE ACT 1882, AMENDMENT AND INTERPRETATION OF, 1906. In the case of Capital and Counties Bank *v.* Gordon [1903], A.C. 240, the House of Lords decided that where a banker credited a customer with a crossed cheque as cash before receiving payment thereof, he did not subsequently receive payment only for the customer, but for himself, so that in the event of a forged endorsement, he lost the protection of sec. 82 of the Bills of Exchange Act 1882, and was liable for conversion, or money had and received, to the true owner. To obviate the risks and inconvenience occasioned to bankers by this decision, the Bills of Exchange (Crossed Cheques) Act 1906 was passed, after several previous futile introductions. It enacts that "a banker receives payment of a crossed cheque for a customer within the meaning of sec. 82 of the Bills of Exchange Act 1882, notwithstanding that he credits the customer's account with the amount of the cheque before receiving payment thereof." Presumably crediting in the pass-book is included, not only the uncommunicated entry in the bank-books. The effect of the Act appears to be confined to cheques, *i.e.* bills of exchange drawn on a banker payable on demand, excluding orders for payment conditional on signature of an annexed receipt and drafts drawn by a branch on head office of the same bank, or *vice versa*, both of which were held in the Gordon case not to be cheques. The new Act further affects only the position between the collecting banker and the true owner, leaving untouched the other rights and liabilities arising from such crediting as cash. These, as deducible from the Gordon case, include the right of the customer to draw against uncleared cheques credited as cash, in the absence of any agreement to the contrary express or implied, and the right of the banker to debit his customer with such cheques, if returned unpaid, or to sue the parties thereto, irrespective of the state of the customer's account.

Two other points were finally decided by the above case: First, that a collecting banker can acquire no protection by crossing to himself, under sec. 77 (6), a cheque received by him uncrossed. Second, that a banker's draft, of the nature before mentioned, though not a bill or cheque, is a draft or order drawn on a banker within the meaning of sec. 19 of the Stamp Act 1853, so that the banker is not liable for paying such documents on a forged endorsement. Again, apart from legislation, sec. 7, subsec. 3, of the Bills of Exchange Act received a somewhat narrow interpretation in the two cases of Vinden *v.* Hughes [1905], 1 K.B. 795, and Macbeth *v.* North and South Wales Bank [1906], 2 K.B. 718, affirmed by C.A. Oct. 16 [1907], 123 L.T. p. 529, in which it was held that the payee of a cheque who is existing and intended to receive the money is not fictitious or non-existing within the meaning of the subsection, though the drawer was not indebted to him, and his name was suggested or even inserted by a third person merely to give colour to the transaction for his own ends. In Colonial Bank of Australasia *v.* Marshall [1906], A.C. 557, the Judicial Committee of the Privy Council decided that the leaving blank spaces when drawing a cheque is not a sufficient breach of the customer's duty to his banker to justify the latter in debiting the customer with more than the original amount of the cheque, should that amount be fraudulently raised and the larger sum paid by the banker innocently and without negligence. The old, but somewhat discredited case of Young *v.* Grote, it was held, can no longer be regarded as of any authority. (See BILL OF EXCHANGE, Vol. I.) J. R. P.

BLOCK, MAURICE (1816-1901). Born in Germany, but educated in France, he became a Frenchman by naturalisation as soon as he was of age, and was attached from 1843 to 1861 to the statistical department of the ministry of Agriculture, Industry, and Trade; in 1880 he was elected a member of the *Académie des sciences morales et politiques*.

An untiring worker in the field of statistics, Block edited during forty-four years (1856-1900) the *Annuaire de l'économie politique et de la statistique*; he also published the *Statistique comparée de la France* (2 vols., 2nd edit. 1875); the *Traité théorique et pratique de la statistique* (1886), and several works of reference, such as the *Dictionnaire de l'administration française* (4th edit. 1898), the *Dictionnaire général de la politique* (1874), and the *Petit dictionnaire politique et social* (1896).

Conversant with most European languages, Block from 1866 to the end of his life wrote for the *Journal des économistes*, a quarterly review

of periodical economic publications issued out of France (*Revue des principales publications périodiques de l'étranger*). He condensed the fruits of his extensive reading and of his lifelong interpretation of foreign thought in the two volumes of his *Progrès de la science économique depuis Adam Smith* (two editions, 1890 and 1897). The plan adopted is the treatment of each subject (nature, labour, capital, credit, etc.) in a distinct chapter; at the beginning the present state reached by science is exposed, and at the end the views of the leading French and foreign economists are summed up, mostly in their own words.

A clear and exact thinker, with a tendency to sarcastic humour, Block remained faithful to the doctrines prevalent at the time of his youth, and considers reason a safer scientific guide than feeling and ethics. E. Ca.

BOCCARDO, Girolamo (1829-1904), born in Genoa, died in Rome. He began his career as a journalist in 1848, but refused to enter into political life when Cavour offered him the undersecretaryship of the ministry of Agriculture, Industry, and Commerce. He was president of the Technical Institute of Genoa and professor at the university. In 1877 he was appointed senator, and in 1888 councillor of state. As an economist he was a very learned but not original thinker. He worked for the diffusion of economic science by writing in 1853 a very concise and clear manual of political economy, substantially on the lines of John Stuart Mill and his French contemporaries, a manual which had a great success, especially among students preparing for examinations in public offices where political economy was requisite and amongst students of technical institutes. In 1859 he published a *Universal Dictionary of Political Economy and Commerce*, which was republished 1875. But Boccardo influenced the studies of political economy more particularly when he succeeded Ferrara in the editorship of the *Biblioteca dell' Economista*. Ferrara used to say he knew of no German economist worth reading except Roscher, and would not publish translations of German economists; Boccardo went in the opposite direction and opened the *Biblioteca* to all dissenters from the so-called classical school (see Classical Economists). He published, besides Roscher, Schäffle, Wagner, Schönberg, Marx, Lassalle, and amongst the English Macleod and Owen. Boccardo, very naturally, considering his receptive mind, was under the sway of Spencer's evolutionism, and strongly inclined to sociological studies. His prefaces to the economists whose works he published are easy and interesting reading, like articles in the *Revue des Deux Mondes*; but they are very far from being comparable to those of Ferrara, his predecessor. The principal subjects they discuss are: the economic and social problem in Germany; the heretics of political economy and social legislation; the principles of science and art in finance; quantitative methods applied to economics, statistics, and social science; the philosophical principles of political economy; method and limits of political economy; man and animal; sociology in history, science, religion, and the Cosmos; credit and banks. In these essays he tried to render classical and political economy more complete and correct by utilising mathematics, biology, and history. Boccardo published also Jevons and Walras. Besides these purely scientific publications, he took a very active share in questions of the day, concerning the Italian banks of issue, forced currency, mercantile marine, labour problems. He was a free trader and opposed socialism on many occasions. When wearied with economic studies he used to turn to physical geography, and wrote on earthquakes and volcanoes, and also on the physical structure and formation of our globe. He was a man full of character, and esteemed for his strong sense of duty. M. P.

BUREAU OF LABOUR. See Vol. I., and Unemployed, Appendix.

BUTT, Isaac (1813-79), born at Glenfin, Donegal, scholar of Trinity College, Dublin, during his collegiate course showed great ability in classical studies. He succeeded M. Longfield as Whately professor of Political Economy at Dublin 1836-41, and accepted his predecessor's conclusions on the productivity theory of wages and the marginal productivity theory of interest in economic science. (See Longfield, vol. ii., and in Appendix.)

Butt repeated and developed the doctrine in a monograph entitled *Rent, Profit, and Labour*. Professor Seligman tells us that the theory of marginal productivity as applied to capital and labour "seems obvious and simple enough, but until the appearance of Dr. Longfield's letters it was not thought of." Butt was called to the Irish Bar in 1838, and to the English Bar, Inner Temple, in 1859. Of his ability and brilliancy as an advocate, or of his association with politics and his parliamentary career, we cannot speak at any length here. He is stated to have been the first to have used Home Rule as an effective election cry, and to have been probably the inventor of the phrase. Latterly he found himself unable to manage the party he had created. The treatment he received almost broke his heart.

Butt wrote—*Rent, Profits, and Labour: A Lecture delivered before the University of Dublin in Michaelmas Term, 1837* (Dublin, 1838), and a larger *Introductory Lecture delivered before the University of Dublin in Hilary Term 1837*, Dublin, 1887. In this he follows Say in defining production as the "creation of utility," rather than the "creation of value," and is especially severe on those economists who wish to limit the term wealth to material objects. Immaterial, like material,

objects are equally forms of wealth. He also objects to identifying capital with the instruments of production. His writings on other subjects are numerous and able.

[Prof. E. R. A. Seligman—"On some Neglected British Economists," in the *Economic Journal*, London, 1903.—*The Dictionary of National Biography*.]

CENSUS OF PRODUCTION IN THE UNITED KINGDOM. The census of production to be carried on under the Act of 1906 will give statistics of considerable importance on the economic activity of the country. But the difficulty of making the inquiry in such a manner as to secure an accurate statement is very great, for it is only too easy to add in the value of the constituent portions of many productions two or three times over. Take, for instance, so simple an industry as that of the basket-maker. If the basket-maker buys osiers from a grower, the grower should return, say, £500, as the value of his osiers sold to the basket-maker. When the basket-maker makes his return he enters, we will say, £1500 as the value of his finished productions, the difference between the two being made up by the cost of the labour employed. As the cost of the osiers is part of this value, they have been counted twice if the osiers have been purchased—though once only if the grower of the osiers makes them himself into baskets. Again, in textile manufactures, if the spinning and weaving industries are separated the yarn is counted twice; if the wool is produced in the same country, and the census include agriculture, it is valued three times.

The whole difficulties are referred to in a very careful paper by Mr. G. Udny Yule, printed in vol. lxx. (31st March 1907) of the *Proceedings of the Royal Statistical Society*. Here we can only call attention to the fact of the inquiry being made. When one remembers the great objection felt by both producers and traders to giving any information as to their businesses, some idea may be formed as to the difficulty of this part of the work. And the further difficulty as to getting clear information must also be borne in mind.

Agriculture is not included in the British Census of Production Act, as the Board of Agriculture and Fisheries already covers the ground very completely. Statistics of the mining industry are also given by the Home Office. As these returns are already made in a satisfactory manner by the departments to whom they are entrusted, there was no need to include them.

The first census is to be taken in 1908. The intervals at which the census will be repeated have not at present been determined. It is desired first to obtain some experience as to the working of the Act. The value of the materials used, whether purchased or partly manufactured, will be included, with the numbers of the workpeople and the days they have worked, and the horse-power employed. When the whole arrangements have been brought into working order, we shall have far better information than exists at present as to the real condition of the industry and internal trade of the kingdom.

CERNUSCHI, HENRI (1821-1896), born at Milan, is principally known by his writings on finance, and as a strong adherent of bimetallism, holding that the ratio should stand unalterably at 15½, notwithstanding variations in the market price of silver. He is regarded as the originator of the term "Bimetallism." He was educated for the legal profession, but his studies were interrupted by the revolutionary movement of 1848, in which he took part. He sat in the National Assembly at Rome in 1849-50, till the revolutionary government fell, when he escaped to Paris. There, naturalized as a French subject, he made a considerable fortune in banking, and took a strong interest in politics. He opposed the Socialist movement, and especially the *plébiscite* of 1870, spending large sums of money in doing this, as well as in putting into practice his theories of co-operation.

He wrote: *Mécanique de l'Échange*, 1865.—*Illusion des Sociétés Co-opératives*, 1866.—*Or et Argent*, 1874.—*La Monnaie Bimétallique*, 1876.—*La Bimétallisme en Angleterre*, 1879.—*La Bimétallisme à quinze et demi necessaire*, 1881.—*Le grand procès de l'Union Latine*, 1884.

CLAMAGERAN, JEAN JULES (1827-1904). Although born in New Orleans, he was in 1850 admitted as a member of the Parisian bar, and later on made himself known as an opponent of the Imperial Government and an adherent of republican opinions. During the siege of Paris in 1870-1871 he superintended the service of public subsistence as *adjoint* (deputy) of the *Maire* of Paris. In 1879 he was appointed a councillor of state, and in 1882 he was elected a life senator.

Clamageran has largely contributed to periodical publications on questions of the day, both juridical, economical, and even religious (he was a Protestant). In 1873 he published a volume of constitutional, economic, and administrative essays under the title *La France républicaine*, and in 1874 another entitled *L'Algérie, impressions de voyage, avec une étude sur la Colonisation*, but his main claim to be remembered as an economist is his great history of taxation: *Histoire de l'impôt en France*, 3 vols., 1867-1868 and 1876. It is the only extant general work on the subject, beginning

with Roman Gaul, and ending at the accession of Lewis XVI. It is full of detailed and extensive information, and although no trained mediæval scholar, the author leads the reader safely through the maze of mediæval financial policy. His last volume, devoted to the last century of the *Ancien régime* (1683-1774), acknowledges the improvement of French finance since the death of Lewis XIV., but concludes that monarchy, fallen into disrepute by the vile reign of Lewis XV., had lost the moral power necessary to bring the task of reform to a satisfactory close.

Immediately after his death his widow collected and issued a volume of *Études politiques, économiques et financières* (1904), amongst which should be mentioned a Study on French finance from 1874 to 1889. E. CA.

CLEARING HOUSE, THE LONDON BANKERS'. Little is known of the early history of the London Bankers' Clearing House. Tradition says that the clearing system had its origin in the daily meeting in their luncheon hour of certain bankers' clerks at a chop house, probably the Five Bells in Dove Court, Lombard Street, between St. Mary Woolnoth and Smith's Bank, where the clerks used to lunch and exchange the cheques they had upon each other's firms.

The convenience of the system was evident, and the meeting in the public room was officially recognised by the joint renting by the bankers of a room in the chop house.

In 1773 we find entries in bankers' books: "To quarterly charge for use of the clearing room, 19s. 6d."

The next step, probably taken about 1784, was the renting of a larger room at Mrs. Irving's, next door to the Five Bells. Complaints being made that the room was too small, the first floor was taken out to make the light better and the room cooler.

In 1800 there were forty-three banks in the Clearing House, and some five years later a larger room was taken next to Messrs. Smith Paynes, and two inspectors were appointed, Mr. Thomas and Mr. White, the wine merchant of Lime Street.

In 1810 Mr. Thomas stated in his evidence before the Bullion Committee, that there were forty-six banks in the Clearing House, and that the average amount cleared was £4,700,000 daily, or on Stock Exchange settling days about £14,000,000, but it seems probable that the amounts quoted were for both sides, received and paid.

In early days the differences were paid by bank notes and gold, but later only notes of £50 and upwards were used, the balance in excess of the last £50 being carried forward to the next day's account. In 1839 the average amount of bank notes thus used was £213,100, the largest amount used in one day being £593,300, the smallest £108,000.

In 1829, when the house became too small and was rebuilt, there were thirty-nine banks clearing. By 1841 these had been reduced to twenty-nine. Until 1854 the private banks alone shared the control of the Clearing House, and refused with scorn the repeated applications for admission made by the joint stock banks, which had come into existence after 1833, and were regarded as scarcely respectable by the private banks. By 1854, however, it had become obvious that the joint stock banks had come to stay, and would, if perpetually repulsed from the Clearing House, start a Clearing House of their own, and in that year the following joint-stock banks were admitted, London and Westminster (founded 1834), London Joint-Stock Bank (1836), Union Bank of London (1839), London and County Bank (1839), Commercial Bank of London (1840), followed shortly afterwards by others, most of whom were admitted on amalgamation with a private clearing bank.

Another important change took place in this year 1854, for on May 11th the system of paying the balance due to or from the Clearing House in bank notes ceased, and the accounts have since been settled by cheque on the Bank of England, with which it is essential that each of the clearing banks should have an account. In 1858, as a countermove to the Country Bankers, who were proposing a separate Clearing, the Country Clearing was established on the lines of a scheme proposed by Mr. John Lubbock, now Lord Avebury, with the result that country cheques, being henceforth easily collected, took the place of notes and bankers' drafts, and became part of the currency system of the country, thus effecting an enormous saving in the use of notes and coin.

In 1864 the Bank of England entered the Clearing House, but clears on one side only, the outside, for while the bank presents to the clearing bankers at the Clearing House all cheques payable by them, all cheques and bills drawn on the bank are presented by the clearing bankers direct to the bank. In 1907 the Metropolitan Clearing was established.

The totals for the years of the paid clearing were:—

1839	£954,401,000
1868	3,425,185,000
1876	4,968,480,000
1886	5,901,925,000
1896	7,574,853,000
1906	12,711,384,000

Owing to trade conditions, the periodical recurrence of trade payments, and of Stock Exchange and Consol settling days, the average daily total of the clearing has, taken by itself, little or no statistical value. The returns are therefore divided into four groups: Stock Exchange Settling Days, Consol Settling Days, Fourths of the months, and Ordinary Days. The averages being:

Dates.	1868.	1876.	1886.	1896.	1906.*
	£	£	£	£	£
Stock Exchange Settling Days	21,806,200	31,712,100	49,939,800	48,452,700	84,649,200
Consol Settling Days	11,212,600	18,829,000	21,958,000	31,696,100	53,711,200
Fourth of the Month	12,922,300	18,828,000	17,959,900	24,223,400	43,734,700
Ordinary Days	9,637,800	14,162,600	15,869,800	21,633,000	36,479,000
Daily Average	10,978,200	16,167,700	19,224,500	24,593,700	41,405,000

* *N.B.*—Country Clearing returns not included in these figures for 1906.

A total of over £100,000,000 for one day's working has been reached on more than one Stock Exchange Settling Day, and for the first ten months of 1907 the daily total of the clearing had only on four occasions fallen under £30,000,000, and that only by a few thousands. Such growth as is shown above is amazing in the vastness of its figures, and has been steadily continuous for some years. In the past twelve years the work has doubled. Indeed, did the old conditions, when the figures of all cheques had to be taken down by hand, still obtain, the present Clearing House would be far too small for the staff of clerks that would be necessary. However, mechanical ingenuity has solved the difficulty, and by the aid of the Burroughs machine cheques are not only listed, but the amounts totalled at one operation, and all errors, save those caused by taking down the amount of a cheque wrongly, are eliminated.

The actual figures of the returns are as follows:—

Dates.	1868.	Proportion to Total.	1876.	Proportion to Total.	1886.	Proportion to Total.	1896.	Proportion to Total.	1906.	Proportion to Total.
	£		£		£		£		£	
On the 4th of the Month	155,068,000	4·5	225,936,000	4·5	215,519,000	3·7	290,681,000	3·8	524,816,000	4·1
On Stock Exchange Account Days	523,349,000	15·3	761,091,000	15·3	1,198,557,000	20·3	1,162,866,000	15·3	2,031,582,000	16·0
On Consols Settling Days	134,552,000	3·9	225,948,000	4·5	263,473,000	4·5	380,354,000	5·0	644,584,000	5·1
On Ordinary Days	2,612,216,000	76·3	3,750,505,000	75·7	4,224,376,000	71·5	5,740,952,000	75·9	9,510,402,000	74·8
Totals for the years	3,425,185,000	100	4,963,480,000	100	5,901,925,000	100	7,574,853,000	100	12,711,334,000	100

In comparing the above figures with those of other Clearing Houses, it must be remembered that the Bank of England clears only on one side. Did it clear on both sides, the annual amount would be very largely increased.

The Clearing House is situated in Post Office Court, Lombard Street. Of the building itself little need be said; it possesses no architectural features within or without, but has been added to and altered as the work has increased, till it now, 1907, consists on the ground floor of a large room of irregular shape, in which the town clearing is conducted, and of other rooms upstairs in which the country and metropolitan clearings are carried on.

Desks are placed round the walls and in the centre of the rooms, a certain number being allotted to each bank, according to its requirements. The banks are arranged more or less in alphabetical order, and sufficient space is left between the central and wall desks to enable the clerks to pass round the room and deliver their charges as the bundles of cheques are called. For the working of the Clearing House each bank has, in principle, though modified by the use of the Burroughs machine, two special sets of books ruled in columns, in which the cheques are entered under the head of each of the clearing banks. One set of these books, the out-clearing books, are written up at the office; the other, the in-clearing books, at the Clearing House. It must be remembered that "out" and "in" clearing are only relative terms, and that what is sent to the Clearing House by Bank A as out-clearing, becomes when delivered to B at the Clearing House the latter's in-clearing.

The first step in the clearing is the sorting, in the office of each bank, of the cheques drawn on the other clearing banks under the names of those banks. Each parcel of cheques so sorted is entered by the out-clearer in his books at the bank under the head of the paying bank. If the list is a long one casts are made at intervals, and the total of these casts recorded as a check to accuracy on the back of the last cheque of each cast, which is turned over to draw the attention of the receiving clerk at the Clearing House to the cast, so that he can agree as he completes each cast. From the bank a clerk takes the charges to the Clearing House, and delivers them at the desk of each paying bank. The process is now repeated. The paying bank's in-clearing clerk takes down the charges in his books, or on the type-written rolls of the Burroughs adding and listing machines, taking care to see that the casts agree, and the cheques when taken down are sent to

the office of the paying bank for verification or return.

At the close of the clearing each bank sends down its out-clearing books to the Clearing House, in order that they may be agreed with the in-clearing books of the banks there.

If the totals do not agree the books are compared and mistakes rectified. If the mistake is in the cast, the bank making the mistake corrects it; if the figures differ, the out-clearers alter their books to agree with the in-clearers; and should it ultimately prove that the mistake was the other way, the draft is produced and the difference claimed.

When the totals of the out- and in-clearing books are agreed, a sheet, having the printed list of the clearing banks in the centre, and a cash debtor or creditor column on either side, is drawn up by the head clearer of each bank, showing the balance due from or payable to each other bank; the two sides are then cast up, and the balance receivable or to be paid entered on a green ticket if the former, and a white if the latter. This ticket, which has to be signed by the inspector of the Clearing House, is an order to the Bank of England, either to transfer from the money at the credit of the account of the clearing bankers to the receiving bank's account, or from the money at the credit of the paying bank's account to the account of the clearing bankers, the amount of the balance, according as the balance is debtor or creditor.

As described above, the clearing will have taken place without any difficulties, but in practice certain other factors have to be reckoned with.

In the first place, every cheque that passes through the clearing cannot be paid by the banker it is drawn on; some have to be returned from lack of funds on the customer's account, or because the drawer has stopped the cheque, or because the endorsements are not in order, as well as for other reasons.

Such cheques, which must bear a written statement as to the reason for which payment is refused, on being returned to the Clearing House, are distributed so soon as the in-clearer has entered them on the debtor side of his sheet in the same way as the charges, and are included in the balance-sheet before the final balance is struck.

The day's work at the Clearing House now, 1907, commences with the newly established *Metropolitan clearing*. This opens at 9 A.M. on ordinary days, and 8.45 A.M. on Saturdays, and closes at 10.30 A.M. on ordinary days, and 9.50 A.M. on Saturdays.

By the institution of this clearing the necessity for each bank to send out walk clerks to collect payment for cheques drawn on clearing bankers in the Metropolitan area has ceased. Each bank receives at the Clearing House all cheques drawn upon its Metropolitan branches, and forwards them direct to each branch, getting back the returns before 4.5 P.M. on ordinary days, and 1.30 P.M. on Saturdays.

All differences in the Metropolitan clearing are adjusted through the Town clearing.

The total of the "in" and "out" charges of the Metropolitan clearing are added to the amount of the Town clearing sheets.

In order to simplify the sorting of the cheques into the three clearings—Town, Country and Metropolitan—the letters T, C, or M, as the case may be, are now added at the bottom left-hand corner of the cheques.

To render the Metropolitan clearing more effective, the numerous branches within the Metropolitan area of the London and Provincial Bank, which is not in itself a clearing bank, clear through their agents Messrs. Glyn and Co., and it is probable that before long the West End and Smithfield Banks will be invited by their clearing agents, subject to the consent of the committee of clearing bankers, to clear in the same way.

Following on the Metropolitan clearing comes the Country clearing from 10.30 A.M. to 12.30 P.M., except on Saturdays, when the work begins at 10 A.M. and closes at 11.30 A.M. Owing to the fact that cheques in this clearing have to be forwarded to the country, and any returned cheques notified, it is impossible to adjust the balances the same day, or indeed until the next day but one, when they are entered on the Town clearing sheet.

Until 1902 the figures of the Country clearing were merged in those of the Town, but since that year they have been given separately. The total for 1902 was £870,189,000, which had increased to £992,313,000 for 1906.

The Town clearing commences in the morning, but the heavy work begins at the opening of the afternoon clearing at 2.30 P.M., and increases in volume till 4.5 P.M. on ordinary days, when the doors are shut, and no more articles can be received that day. The next half-hour is spent in receiving returns (returned cheques) and adjusting the balances, and shortly before 5 P.M., if the day is not a very heavy one, the work is done. On Stock Exchange settling days and other busy days the work continues for some little time longer.

R. M. H.

COGNETTI DE MARTIIS, SALVATORE (1844-1891), born at Bari, died in Turin. When still a student of law at Pisa, the war of 1866 broke out. Cognetti marched with Garibaldi and was wounded at the battle of Condino. In 1868 he was appointed teacher of political economy in the Technical Institute of Mantua, and stayed there till 1878, when he obtained the chair of political economy at the University of Turin.

Cognetti considered economics as a branch of sociology. His mind was completely under the

sway of Darwin (see DARWINISM and SPENCER). He also thought that economics was not in its proper place in the curriculum of faculties of law, as is the case at all Italian universities, unless taught so as to connect it with other branches of social science, history, ethnology, morals, law, politics, etc. The publication which gained for him his position at Turin was a book on *The Primitive Forms of Economic Evolution* (*Le forme primitive dell' evoluzione economica*), 1881, Loescher, Turin. In this book he discusses economic phenomena—and other social phenomena—among savage tribes and even among animals. His use of the latter illustration was often laughed at. But the book contains many interesting particulars, and became more appreciated in course of time. Among questions discussed therein, and later taken up again by Cognetti himself, I may mention the *origin of barter*, and consequently descriptions of *silent barter*. This topic was then a very novel one. In 1889 he published a book on *Ancient Socialism* (*Socialismo Antico*), Bocca, Turin, in which he traces socialism in ancient legends of Greece and Rome, of India and China, and gives summaries of doctrines of Chinese socialists, such as Mih Teih and Uang Ngan Shi, of Persians, such as Mazdac, and Hindus, such as Vishnu Das Kavi, besides going through all the Greeks. This book, again, was rather unusual, as coming from an economist, but had a better success than the former. It will be explained if I say that Cognetti was a passionate student of literature, and translated Plautus into very good Italian verses, and wrote historical essays. As an economist he wrote in 1891 an interesting book on *Socialism in the United States* (*Il Socialismo negli Stati Uniti*), Turin, a book which is eminently a history of the many socialist sects which have tried experiments in the States. He continued the *Biblioteca dell' Economista*, a collection of translations of foreign authors, which had been started by FERRARA. His prefaces, however, to the various authors whose works are translated, fall very far short from the excellency of those of Ferrara. When a discussion turned on what may be called economic niceties, he was soon out of his depth; very close reasoning was less agreeable to him than historical research. He wrote two more books, one in his true line: *On the Formation, Structure, and Life of Commerce*, and one on *Protectionism and Free Trade*, for which he was less fitted. Cognetti created at Turin a laboratory of political economy, collecting for it funds and a very large library. In this seminary of economic studies he trained some distinguished scholars. He had an extremely genial character, and his house was of an evening open to many friends. He was still full of vigour when he died of pneumonia. A complete bibliography of his writings is to be found in the *Riforma Sociale*, Anno viii. vol. xi. p. 705. M. P.

COLONIAL POLICY—RECENT DEVELOPMENTS.—This article does not purpose to give a history of the growth of self-government in the British Colonies, a good account of which will be found in Professor Egerton's *Short History of British Colonial Policy*. Neither does it deal with the basis and limits of colonial self-government from the point of view of constitutional theory. For that aspect of the case the reader may be referred to Professor A. V. Dicey's admirable work on *The Law and the Constitution*. The present inquiry is neither historical nor technical nor legal. It is an attempt to examine the relations at present existing between the self-governing Colonies and the United Kingdom, and between these Colonies *inter se* from a purely political and practical point of view.

The inquiry is confined to the Colonies which are commonly described as having "complete self-government" or "responsible government," *i.e.* an Executive responsible to a popularly elected Legislature, and requiring a majority in at least one of the chambers of that Legislature in order to remain in power. This system, which is a reproduction *mutatis mutandis* of the existing unwritten, but none the less unquestioned, constitution of the United Kingdom, prevails in all the larger and more populous Colonies of the Empire mainly inhabited by people of European race. These are the Dominion of Canada, the Commonwealth of Australia, New Zealand,[1] Newfoundland, and three of the South African Colonies, viz. Cape Colony, Natal, and the Transvaal. By the time this article is in print a fourth South African Colony, viz. Orange River, will have been added to the list of the "completely self-governing" Colonies.

Enormously as these communities differ *inter se* in size, wealth, and population, they are all equals in constitutional status, and they are all intensely jealous of their right to manage their own affairs without interference from the United Kingdom or from one another. So strong has this feeling grown that even the term "Colony" is now objected to, as implying some degree of dependence, and it would, no doubt, conduce to a good understanding if we could all agree to abstain from describing these communities as "Colonies," and call them by some more dignified and appropriate title, such as "States of the Empire."

But this designation at once brings us face to face with the anomalous character of this so-called "Empire," which, as a political entity, has no analogy in history. It is, indeed, far less misleading to describe Canada, Australia, and the other self-governing communities above referred to as "States," than to describe them and the United Kingdom collectively as an "Empire." The United Kingdom and its dependencies, such as India, our various "Protectorates," and the Colonies which are not completely self-governing, may indeed be described as an "Empire" in the ordinary sense of the word. But when we extend the term "British Empire" to include the self-governing

[1] Since this article was written, New Zealand has received the title of "Dominion," like Canada.

States, it is necessary to remember that we are stretching language, and using the word "Empire" in a novel and, etymologically, indefensible sense.

But this abuse of language is justified by practical considerations. It serves to indicate the continued existence of a political bond between the genuine Empire and the self-governing States, which is not the less real because it is exceedingly difficult to analyse and define. And it is worthy of note that the self-governing States are, as a rule, no less jealous of their claim to be regarded as members of the Empire than they are jealous of their "independence" of the United Kingdom and of one another. The word "Empire" is as popular with the people of these States as the word "Colony" is unpopular, and this fact is of immense significance. It testifies to an underlying sense of unity, an enduring desire to remain, in some way or other, though the way is seldom formulated or clearly thought out, members of a single body politic distinct from the rest of the world.

The problem of the future, as far as the British Empire is concerned, is how to satisfy that desire without curtailing the autonomy or hampering the individual growth of a number of self-governing States. Independence on the one side, Imperial unity on the other—are these irreconcilable ideals? Undoubtedly they are if we push the idea of independence too far. There is no binding relationship, however voluntary, no alliance, no partnership, no contract even, which leaves the parties to it absolutely independent of one another. Every form of union implies some limitation to freedom of action on the part of its individual members. But then it is not independence in the sense of the absence of any binding relationship with other parts of the Empire, which the people of the self-governing "Colonies," or at least the majority of them, really desire. They are determined to be independent in the management of their local affairs. And even with regard to affairs not purely local, they have a growing dislike of subordination to any external authority except that of the Crown. But it does not follow that they would not fall in with, and indeed welcome, any arrangement for the management of affairs not purely local, even though it limited their freedom of action, provided that it was based on the principle of co-ordination, not of subordination. It is perfectly evident that any common institutions, and even any common action, embracing the self-governing Colonies and the rest of the Empire, must start with the idea of partnership, of the voluntary combination of a number of units, equal in status, though no doubt greatly varying in strength, and not with any idea of tutelage or dependence.

The very fact, already referred to, that the self-governing Colonies accept, and even glory in the authority of the Crown, is sufficient evidence that they do not desire independence in the sense of absolutely separate existence. It may be said that they accept that authority only because it is nothing more than nominal; and there is some truth in this argument, but it is not the whole truth. That strong loyalty to the sovereign, which is undoubtedly felt in the self-governing Colonies, is due to something more than gratitude for non-interference. It is due to a feeling of pride in the Crown as an august institution, common to the whole Empire, in which they have just as much lot and part as the people of the United Kingdom. The traditional relationship between the King and his subjects is just the same relationship, whether these subjects are born and reside in Canada, or Australia, or in Great Britain. He is their sovereign, just as much as he is the sovereign of the people of these islands. This is not mere theory. It is the actual sentiment of the people of the self-governing States, and in such a matter sentiment is everything. Wholly different is the Colonial attitude towards every other institution of the "Mother Country," not excepting the British Parliament. That body enjoys and always will enjoy a certain prestige with the younger States of the Empire as being the progenitor and archetype of their own Parliaments, but though they may regard it with respect, they do not feel that they owe it any allegiance. It is in no sense theirs as the Crown is. It does not represent them, but only the people of the United Kingdom. And still less do they feel disposed to bow to the authority of the British Ministry of the day, deriving its power, as it does, solely from the British Parliament in which the Colonies are not represented.

Here then is the problem in a nutshell. The self-governing Colonies, speaking broadly, are "loyal to the Empire." They desire to remain in some sort of political union with the United Kingdom and its dependencies, and with one another. They gladly recognise the authority of the King as the head of that union. But, according to constitutional theory and practice, "the King reigns, but does not govern." And there is no *governing* power, no actual executive authority, under the King, which commands the complete allegiance of the self-governing Colonies, because there is no such authority in the constitution of which they have any share —no common Parliament, no common Minister.

No doubt in theory the Parliament of the United Kingdom is supreme throughout the Empire. It could legislate for the self-governing Colonies as well as for any other part of the dominions of the Crown. But in practice it no longer does so, except at the request of these Colonies themselves, because it recognises its non-representative character as far as they

are concerned. The British Ministry, on the other hand, does from time to time take executive action affecting even the self-governing Colonies, as in the case of treaties and negotiations with Foreign Powers, and that action may be not only independent of, but actually contrary to the desires of the Colony or Colonies concerned. In the recent case of the Newfoundland fisheries the action of the British Government was contrary to the wishes of Newfoundland; in the case of the New Hebrides it was contrary to the views of Australia and New Zealand.

Such incidents are clearly injurious to good relations between the mother-country and the Colonies, and even fraught with danger to the unity of the Empire. Yet under present conditions it may be difficult to prevent their recurrence. They are not due to any want of good-will on the part of British Ministers, but to a difficulty inherent in the loose political organisation of the "Empire." There must be some authority capable of representing the Empire as a whole in dealing with Foreign Powers. As matters stand, the only possible authority is the British Foreign Office, which is a branch of an executive Government in which the Colonies have no part. The practical justification for that government, the government of the United Kingdom, acting on behalf of the Colonies, which it does not truly represent, as well as of the United Kingdom which it does represent, must be sought in the fact that the burden of the defence of the Empire rests almost wholly on the people of the United Kingdom. It is they who would have to bear the brunt of any difference with Foreign Powers, even if it arose over some question directly affecting only one or more of the self-governing Colonies, and in which the United Kingdom itself had only an indirect interest. There is thus a genuine and permanent dilemma. It is only natural that that part of the Empire which is responsible for the safety of the whole should control the relations of the Empire with Foreign Powers. Yet it can never be satisfactory that the United Kingdom should take action affecting the other "self-governing" States without their consent. In so far as it does that, it treats them, not as partner States, but as dependencies, and that, as we have seen, is a position to which they are no longer inclined to submit, and to which, having regard to their growing strength and importance in the world, it is not reasonable or desirable that they should submit.

The only logical solution lies in a federal system, under which the "self-governing" States would share, to the extent of their ability, the burden of the common defence, and would receive in return a proportional share in the control of policy. But the adoption of anything like a complete federal system is beset with difficulties, which are certainly at present, and may be at all times, insuperable. On the other hand, the pressure of circumstances will certainly necessitate the introduction of makeshift arrangements having a federal tendency. And it is possible that the ultimate result may be the creation of a network of special arrangements between the mother-country and the self-governing Colonies, and between these Colonies *inter se*, providing for the co-operative regulation of various common interests. The alternative is complete separation, to which, however, as we have seen, the sentiment of the majority of the people in all parts of the Empire is opposed.

Recent history, no doubt, contains evidence of a movement in both directions—a movement towards separation, and a movement towards closer union, and there is room for difference of opinion as to which is the stronger of the two. On the one hand, the dissatisfaction felt in the Colonies with the manner in which their external relations have been handled by the Imperial Government has led (notably in Canada after the unpopular settlement of the Alaska Boundary question) to a demand for "the treaty-making power." Great latitude is already enjoyed by the Colonies in dealing with the commercial relations between themselves and Foreign States. But if this tendency were to be carried to the length of giving to each self-governing Colony the right to make treaties with Foreign Powers irrespective of the United Kingdom and of the other self-governing Colonies, it is difficult to see how their position could be differentiated from that of a number of wholly separate States. On the other hand, recent years have witnessed not only a remarkable increase in the sentiment of relationship and community of interest, but a series of attempts, so far not very successful, yet persistently renewed, to provide some means for enabling the governments of the United Kingdom and of the self-governing Colonies to act together in matters of common concern. The most important of these have been the meetings in 1887, 1897, 1902, and again in the spring of the present year, 1907, of the body formerly known as the "Colonial" and now as the "Imperial" Conference. These meetings, at first occasional and informal, have now, by virtue of a resolution unanimously adopted at the latest of them, held in London in April and May 1907, acquired a more definite and permanent character, and the "Imperial Conference" may therefore be regarded as having become part of the institutions of the Empire. It is, in fact, the only live political institution common to the United Kingdom and the self-governing Colonies, with the exception of the Crown. Its nature and functions were defined by the resolution just mentioned, which, in view of the importance of

the matter, it may be desirable to quote in full. The resolution runs as follows:—

"*That it will be to the advantage of the Empire if a Conference, to be called the Imperial Conference, is held every four years, at which questions of common interest may be discussed and considered as between His Majesty's Government and His Governments of the self-governing Dominions beyond the seas. The Prime Minister of the United Kingdom will be* ex officio *President, and the Prime Ministers of the self-governing Dominions* ex officio *members of the Conference.*

"*The Secretary of State for the Colonies will be an* ex officio *member of the Conference, and will take the chair in the absence of the President. He will arrange for such Imperial Conferences after communication with the Prime Ministers of the respective Dominions.*

"*Such other Ministers as the respective Governments may appoint will also be members of the Conference—it being understood that, except by special permission of the Conference, each discussion will be conducted by not more than two representatives from each Government, and that each Government will have only one vote.*

"*That it is desirable to establish a system by which the several Governments will be kept informed during the periods between the Conferences in regard to matters which have been or may be subjects for discussion, by means of a permanent secretarial staff, charged, under the direction of the Secretary of State for the Colonies, with the duty of obtaining information for the use of the Conference, of attending to its resolutions, and of conducting correspondence on matters relating to its affairs.*

"*That upon matters of importance requiring consultation between two or more Governments which cannot be conveniently postponed until the next Conference, or involving subjects of a minor character, or such as call for detailed consideration, subsidiary Conferences should be held between representatives of the Governments concerned specially chosen for the purpose.*"

The importance of this curious resolution consists almost entirely in its implicit homage to the conception of the United Kingdom and the "self-governing dominions beyond the seas" as a potential confederation, and in any case standing to one another on some exceptionally intimate relation of a permanent kind. Apart from this its practical value is small. The function of the Conference does not go beyond the "discussion" and "consideration" of "questions of common interest." Any decision it may arrive at will still require to be confirmed by each of the States individually before common action can result. And even as a purely consultative assembly the Conference is of very limited utility. "Questions of common interest" are growing in number and importance. They cannot be disposed of in a discussion limited to a few weeks every four years, nor can they be expected to be obliging enough only to crop up, or only to become acute, when such a meeting is impending. Clearly, if the consultation is to be serious, it must be entrusted to some body capable of more continuous activity. An "Imperial Council," not indeed constantly sitting, but capable of being summoned at any time as occasion requires, would appear to be indispensable, if the idea of the several Governments habitually taking counsel together on questions of common interest is to be realised in practice.

But for the establishment of such a Council, even though limited to purely consultative duties, the recent Conference was not prepared. No doubt there was a forward party, consisting of the representatives of Australia, New Zealand, and Cape Colony, who would have been ready to go that length. But the Prime Ministers of Canada and of the Transvaal decisively hung back, and they were supported in that attitude by the representatives of the United Kingdom. And for so important a step as the creation of a common council, unanimity, or at least a great preponderance of favourable opinion, was evidently necessary. So, on the principle that "the pace of a squadron is the pace of its slowest ship," the Conference confined itself to the creation of what may best be described as an Imperial Information Office, in the shape of a "Secretariat," the duties of which would seem to consist in keeping up some sort of touch between the members of the Conference in the four years intervening between any one session of that body and the succeeding session. No doubt such an office, energetically worked, would be capable of considerable development. And the forward party at the Conference were anxious to give it the maximum of influence and prestige by making it an institution common to the whole Empire, independent of any one Government, and responsible to the Conference alone. But conservatism again prevailed, and in the end the Secretariat was made a department of the Colonial Office. Its existence can, therefore, only be regarded as a small concession to the principle of continuous common consultation between the several Governments.

Time alone can show whether these tentative first steps in what has been not inaptly called "Imperial organisation" will lead hereafter to important results. Generally speaking, it is the mass of the people in the different parts of the Empire who are most favourable, if not very deliberately or articulately, to the idea of closer union. It is in government and political circles that there is opposition or reluctance. And this is perfectly natural. The bulk of the people, where they are of British origin, are dimly conscious of the ties arising from community of race, history, and traditions, as well as of the advantages of a common citizenship, and it would appear to them unnatural to

find themselves wholly separated from their fellow-Britons across the seas. Politicians, on the other hand, even when not playing up to the non-British elements, which in some of the Colonies form a large or even preponderant part of the population, are more alive to the practical difficulties which closer union presents. And they are not uninfluenced by the feeling that the independent Governments and Parliaments, to which they respectively belong, would suffer some diminution of individual importance by entering into a real Imperial partnership. Here and there statesmen of exceptional originality and largeness of mind may rise superior to considerations of that nature. But the average politician is certainly affected by them, alike in the Colonies and the United Kingdom. Indeed, it is especially in the United Kingdom that statesmen of the older school, whether Liberals or Conservatives, seem to find a difficulty in conceiving how the foreign policy of the country could be carried on, if it were complicated by the necessity of acting in conjunction with the self-governing Colonies. And yet it is certain that, as these communities grow in importance and play an increasing part in the world, we must "call them into our counsels," if they are not to develop foreign policies of their own and so to become in time wholly separate States, as the British statesmen of fifty years ago, almost without exception, expected and desired that they ultimately should do. Nowadays such a desire is felt by few and avowed by none. But "he who wills the end must will the means." And if we seriously desire the United Kingdom and the self-governing Colonies to remain one body politic, it follows that, whatever its difficulties, the policy of deliberate co-operation in matters of common interest, of which the Imperial Conference and the proposed Secretariat are the first rudimentary expressions, must be steadily pursued, and pursued on lines which in the long-run will entirely transform the present constitution of the Empire.

But that transformation will be gradual, and it is impossible to forecast the exact course of it. Whatever the new institutions which may be evolved to meet the new needs, they are likely to be very different from anything which political theorists have yet imagined. It is only possible here to glance at one or two of the common interests which may compel the creation of common institutions. Among projects tending to promote communication between different parts of the Empire there are none which find more general favour than an all-British steamship route and an all-British system of submarine cables. If either of these were established, it could only be by contributions from the several portions of the Empire directly interested; and, indeed, it is probable that, either in the first instance, or ultimately, the ships and the cables would be the property of the contributing States. The administration of that property would require a Board on which all the owners must be represented. But the common property would not only have to be administered, it might need to be defended. It would only be logical that all the owners should combine to guarantee its protection from external interference. Another and an even more important case for co-operation is in future likely to arise in connection with the dependencies of the Empire. At present the dependencies, from the great dominion of India down to the smallest coaling station which is not situated in one of the self-governing Colonies, are under the exclusive control of the United Kingdom. But there are some of them in which certain of the self-governing Colonies are even now more directly interested than the United Kingdom is, and with regard to others the interest of the self-governing Colonies is certain to increase. Australia and New Zealand are bound to make themselves felt in respect of the British islands of the Pacific. A Federated South Africa will certainly have something to say about the Protectorates beyond the Zambesi. But Great Britain is not likely to abdicate her authority in either of these quarters. The necessities of the case will involve the conclusion of some arrangement by which the burden and the responsibility will be shared between the mother-country and the self-governing Colonies immediately concerned. The above are only a few instances of the way in which the growing complexity of Imperial relations is calculated to compel changes in the machinery of government.

In this brief review of the tendencies making for or against the closer union of the different portions of the Empire nothing has been said on the subject of Preferential Trade. In the opinion of many—and it is an opinion shared by the present writer—the adoption of preferential trade arrangements between Great Britain and the self-governing Colonies would be a powerful factor in promoting Imperial consolidation. But the question is too large to be treated within the limits of the present article, and the history of the movement has received special consideration under another head. [See TARIFF REFORM MOVEMENT.]

The object of the preceding observations has been to direct attention to other aspects of the situation, which are at present liable to be thrown into the shade by the concentration of public interest on the question of preference and the acuteness of the controversy which has arisen with regard to it.

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COMMERCE, FACULTY OF, IN THE UNIVERSITY OF BIRMINGHAM. This faculty began work in October 1902 under the direction of Professor W. J. Ashley, whose varied experience at Oxford and at Harvard University, U.S.A., specially qualifies him for the task of making the first attempt in this country to systematise the preliminary teaching requisite for the higher positions of commercial and financial responsibility, and to raise such teaching to a university standard. As the scheme is entirely new in this country it will be advisable to commence with a description of the method proposed. Its objects are (1) to provide a course of training for men destined for business, and intending to become principals, directors, managers, secretaries, heads of departments, etc., in business firms; (2) to prepare men for the consular service, for masterships on the modern sides of schools, for work in the service of municipalities, or as accountants.

The programme of study includes courses on *Commerce*, on *Accounting*, and on *Finance*, arranged to extend over three years.

(1) *Commerce.* These courses deal with the present condition of trade and of the chief industries of Great Britain and the Empire, and of the leading countries of the world, and include recent industrial history, commercial geography, and training in economic analysis; and further on, the economics of transport, dealing with railway rates, ocean freights, etc. In the third year the courses are different and far more difficult. They are concerned with such subjects as: the Location of Works; Capitalisation; Production on Large and Small Scale; Differentiation and Consolidation of Manufactures; Capitalist Combinations; Limited Companies (Private and Public), their Advantages and Disadvantages; Factoring and Manufacturing; Machinery, its Financial and Industrial Consequences; Works Management; Relations of Employers and Employed, Methods of Remuneration, Hours of Labour; Markets; Advertising; Relation of Selling Price to Cost; Fixed Charges; Methods of Sale and Purchase; Credit and Trade Cycles. The study of these subjects involves the discussion of large questions of business policy with which merchants and manufacturers have to grapple in the conduct of their affairs.

They are supplemented by a short course on the *Methods of Statistics*, the advantage of which will be appreciated by all who have to deal with the history of any industry.

(2) *Accountancy; Accounting.* In this course the first year is devoted to the simpler systems of book-keeping. In the second instruction is given in the method of drawing up accounts to suit different classes of undertakings, so that a set of books may be planned for a particular enterprise. It then enters into an analysis of accounts in order to compute earnings and values. The third year is devoted to departmental accounts and cost accounts. Many concrete illustrations and practical examples of balance sheets are used for purposes of instruction in this course. As Professor Ashley says in his paper entitled *A Science of Commerce and some Prolegomena*, accounting deserves a large place in any scheme of higher commercial education. "Properly taught, it is a subject of great educational value; for it makes its appeal in the last resort not to arithmetical dexterity, but to a sound judgment of a business situation. Moreover, accounting, adequately taught, will handle in a thorough manner the whole difficult question of 'costing.'" And though it is true that cost accounts are mere tools in the hands of their users, "yet they are tools which possess the quality of themselves stimulating reflection. To determine the wise policy to adopt with regard to selling price at a particular juncture is a different thing, it is true, from the mere knowledge of what the thing cost to make. But there is nothing so likely as a knowledge of what a thing costs under varying circumstances, and of the proportion to be assigned to fixed charges, to promote a wise decision as to the price to be asked for it."

Those who have experience in business know how important a good system of accounts is to the prosperity of the particular business, and hence in the natural course of affairs to the general business prosperity of the country.

Although in a small retail business accounts are very simple things, yet in a large manufacturing concern employing expensive materials imported from great distances, and exporting the finished products to many foreign countries, with different tariffs and charges on the imported goods they receive, accountancy becomes a difficult study, and one which affords in itself the basis of a large part of commercial education.

(3) *Finance.*—These courses are given to students only in their third years. They deal with Banking, the Money Market, and the Foreign Exchange, the Stock Exchange, etc.; there is also a short course on Public Finance.

Commerce Seminar.—"All the students working for the degree of B.Com. are brought together once a week at the *Commerce Seminar*, the purpose of which is to train students in independent investigation and reasoning. A subject is assigned some weeks beforehand to each member of the Seminar. He consults the literature of the subject, and makes such inquiries from men in business as the professor may suggest, and then prepares a paper, which is read in the Seminar, and there discussed and criticised. Incidentally, an effort is made to give the members of the Seminar some practice in the art of clear and vigorous exposition, and to accustom them to the preparation of terse and business-like reports."

There are besides a large number of subjects from which students taking the degree of B.Com. must choose. The selection is made according to aptitude and future requirements. One modern foreign language (German, Spanish, French, or Italian) must be studied throughout the course, so that facility may be gained in correspondence and also a knowledge of foreign commercial, financial, statistical, and industrial literature. "It should be as usual for a business man who has dealings with Germany to read the *Industrie-zeitung* or the *Wirthschafts-zeitung* as the *Iron and Coal Trades' Review* or the *Statist*, and no more difficult." A choice is allowed between a second foreign language and a science applicable to manufacture, such as engineering, chemistry, electricity, etc. Students are also allowed to take up any course that they may have time for during their first two years in any of the departments under the Faculties of Science or Arts, such as the courses on British Institutions, European History since 1789, or to enter upon courses with a view to acquiring further scientific knowledge of the main branch of study they have undertaken.

The aim of these courses is (*a*) "to make business more interesting to those engaged in it; (*b*) to enable them to follow the general movement of technological progress, and to realise the directions in which changes of process are probable or possible; (*c*) to show them when they ought to call in an expert, and how much weight they should attach to his opinion."

An account of the institution and aims of the Faculty of Commerce is given by Professor Ashley in a paper, "A Science of Commerce and some Prolegomena," published in *Science Progress*, July 1906; and in his pamphlet, *The Faculty of Science in the University of Birmingham: its Purpose and Programme*, he says, "It was believed that a training could be devised which, while strengthening the powers of judgment, widening the sympathies, and stimulating the imagination—the aims of all really liberal education—would yet be of real value as a *preparation for the practical duties of business life*," and it was desired thus to "gather, arrange, and present the lessons of practical experience," and to "explain the interrelation of those conclusions which, in actual affairs, are arrived at singly and in isolation one from another; and to show that they are not merely accidental happenings, but the natural outcome of the situation."

In connection with the Faculty of Commerce the Council of the University has established an Advisory Board of business men, "believing that the active co-operation of such a body with the academic staff will tend to bring those who control large undertakings throughout the country into closer touch and sympathy with the aims of this section of the University."

[See INDUSTRIAL EDUCATION IN THE UNITED STATES; and in the Appendix, ECONOMICS, TEACHING OF.]

COMMERCIAL INTELLIGENCE BRANCH (BOARD OF TRADE). To meet the desire expressed by the British commercial community for greater assistance by the Government in the development of their trade abroad and in the Colonies, a committee was appointed by the Board of Trade, July 1897, to inquire into and report upon "the dissemination of commercial information, and the collection and exhibition of patterns and samples." The Report was published in 1898 (Cd. 8962).

As a result of this report, the Commercial Intelligence Branch was opened, October 1899, at offices in Parliament Street, with satisfactory results, but in April 1904, in order to be of greater advantage to business men, it was transferred to the City, to 73 Basinghall Street, E.C., where information on all subjects of commercial interest is collected and focussed in a form convenient for reference. The offices of the Branch contain an Inquiry Room where personal inquiries can be made on the subjects dealt with; a Sample Room for the exhibition of specimens of interest received from the Imperial Institute, India, and the Colonies, or illustrative of reports of H.M. Consuls or of the correspondents or special commissioners of the Board of Trade; and a Reading Room, where the latest official publications—British, Colonial, and Foreign—and the latest issues of Trade Directories may be consulted. In the same building special Trade Inquiry Offices have been opened for India, Canada, Transvaal and Orange River Colony, and Queensland, by the Governments concerned, whose representatives attend daily to deal with inquiries and applica-

tions in connection with Colonial trade matters. On application being made to the Commercial Intelligence Branch, either personally or by letter, information is supplied on commercial statistics, Foreign and Colonial import, excise, and consumption duties; port, harbour and tonnage dues and other charges on shipping; customs regulations; consular fees; certificates of origin; regulations concerning commercial travellers and their samples; trading licences; Foreign and Colonial contracts open to tender; firms abroad engaged in particular lines of business, and likely to become purchasers of British goods; sources of supply and prices, etc., of trade products, and other matters of interest to British trade. Information of general interest to British trade, apart from that obtained in response to specific applications, is communicated by the Branch to Chambers of Commerce, and in some cases to individual firms, or, if desirable, is published in the press. The Commercial Intelligence Branch also forwards to Chambers of Commerce, for the confidential use of their members, but not for publication, information to which it has appeared desirable in the interests of British trade to draw attention confidentially. This latter plan met with general approval, and the Board of Trade have continued and extended it. In order to reach all British manufacturers or traders interested, it was decided to supplement the existing system, by opening, 1st January 1907, a Register of British firms who desired to receive confidential information relative to their respective trades. British firms desiring to have their names registered must apply to the Commercial Intelligence Branch on the form which has been prepared for the purpose, copies of which may be obtained on application at the offices of the Branch. (See BRITISH CONSULAR REPORTS.) No charge is made for information supplied, but every firm admitted to the Register is required to subscribe to the *Board of Trade Journal*, in order to ensure that those who wish to receive confidential information should first be in possession of all the information relating to their particular trade published in that journal. The Commercial Intelligence Branch also co-operates with the Imperial Institute, where scientific investigations are carried on with a view to the commercial utilisation of the economic products of the British Empire. This object is supplemented by arranging comprehensive exhibitions of natural products, and providing for their examination and valuation, and by the collection and dissemination of scientific and technical information relating thereto.

The organ of the Commercial Intelligence Branch is the *Board of Trade Journal*, published weekly (price 3d.), containing notices relating to openings for British trade, tariff changes, actual and proposed, shipping and transport, including port and dock dues, railway rates, etc., minerals, metals, and machinery, agriculture, etc., besides statistical tables, notes on important Government publications, and information on other matters of commercial interest. In addition to editing the *Journal* the Branch prepares indexes to the Consular Reports, special reports on particular industries, regulations relating to commercial travellers, etc., and by arrangement with the Foreign Office, a commercial expert attached to the Branch edits the Consular Reports from a commercial point of view. Information on the subjects dealt with at the Intelligence Branch is received chiefly through the Foreign Office and the Colonial Office, or direct from H.M. Diplomatic or Consular officers in foreign countries, and from specially appointed commercial correspondents in British Colonies. Correspondents have been appointed by the Board of Trade in Australia, New Zealand, and South Africa. Some of them are officials in the service of the Colonial Governments in close touch with commercial matters, appointed in conjunction with the Colonial Office. Others are non-official correspondents specially conversant with conditions of trade in their particular districts. Their primary duty is to send information to the Commercial Intelligence Branch with a view to promoting and fostering British trade.

As regards foreign countries, the Branch is in constant communication with His Majesty's diplomatic and consular officers, who have been instructed to forward without delay information of interest to British commerce. Further, with a view to consular officers becoming better acquainted with commercial matters, and with the nature of the information they are expected to supply, all Vice-Consuls (by arrangement with the Foreign Office) now spend some time in the Branch before proceeding to their posts abroad. The Board of Trade further despatches to various countries special trade commissioners to ascertain both the nature and extent of foreign competition which British goods have to meet in those countries, and the means by which such competition may best be met, and to report on possible openings for British trade abroad, and on the selection of suitable correspondents. Commercial missions have been despatched to Persia, Siberia, South Africa, Australia, and New Zealand, Canada and Newfoundland, and Asiatic Turkey, and proposals to despatch missions to other countries are considered from time to time.

In carrying out the objects of the Branch the Board of Trade are assisted by an Advisory Committee, known as the Commercial Intelligence Committee, first appointed in May 1900 for a period of five years, subsequently reconstituted and enlarged, now consisting of twenty-six members, including representatives of the Board of Trade, the Foreign, Colonial, and India Offices, of the principal self-governing Colonies, and of the commercial community. Much valuable work has been performed by the committee in suggesting improvements in the means of collecting and disseminating commercial information, in the selection of suitable trade commissioners and correspondents, and in reporting, after consultation with the leading Chambers of Commerce, on the probable effect of changes in foreign tariffs.

T. G. G.

COMPANIES, INCREASE OF. The following table, compiled from the last return of the Board of Trade, shows the number of limited companies registered in each year, since

1890, under the Companies Acts, and brings down to date the figures comprised in the original article under the same title in Vol. I. of this *Dictionary*:—

Year.	England.	Scotland.	Ireland.
1891	2363	153	81
1892	2279	157	69
1893	2238	184	93
1894	2593	203	89
1895	3458	258	89
1896	4219	304	135
1897	4675	328	145
1898	4550	379	136
1899	4444	323	112
1900	4408	336	115
1901	3069	203	86
1902	3526	247	77
1903	3620	257	115
1904	3421	241	103
1905	3872	284	97
1906	4331	323	112

A. A. U.

CONIGLIANI, CARLO, died in 1901, little more than thirty years old. His death was much deplored. He began his scientific career under Prof. Ricca Salerno and COSSA. He was considered, together with MAZZOLA, the most talented of the younger Italian economists. Notwithstanding his early death, he had accomplished a task which will not soon be forgotten, viz. to write the best book on Italian local taxation, *La riforma delle leggi sui tributi locali*, Modena, 1898, *Societa tipografica*.

His first publication was a book on the theoretical effects of taxation (*Effetti economici delle imposte*), 1890, principally discussing the difficult problem of the incidence of taxation. This book is certainly not his best work and forms no real contribution to the progress of science. It is nevertheless remarkable for the acuteness of many of the observations and strength of reasoning, and surprised all who knew how very young the author was when he wrote it. Conigliani then took to writing essays, collected after his death under the title, *Saggi di Economia politica e di Scienza delle Finanze*, 1903, Turin, Bocca. In these essays he principally discusses financial problems, such as are dealt with in the works of Sax, of Wagner, and of De Viti, placing before the public the theoretical aspects of public finance. His economic essays deal with questions connected with the functions of capital. Conigliani, as economist, was a scholar of the AUSTRIAN SCHOOL (*q.v.*). M. P.

CONSULS, BRITISH, DUTIES OF. A British Consul is required to advise H.M.'s trading subjects and others in his district, to avert and compose differences among them, or between them and the natives of the country, to check the evasion of local revenue laws by British traders, to uphold the treaty rights of British subjects in a temperate manner, to report on the trade of his district, and to send home promptly items of important commercial information.

Births and deaths occurring among British subjects are registered by him, and some Consuls are also empowered to celebrate marriages.

He may grant certificates of naturalisation to aliens and issue passports to British subjects. He may also advance for the erection or upkeep of Anglican churches, hospitals, and places of interment, sums equal to the amounts subscribed for the purpose by British subjects.

A Consul's duties with regard to British shipping are very important. Consuls are bound to send to the Board of Trade such reports and returns as they may require, and to see that all British vessels carry the documents and colours prescribed by law, and he may grant terminable and provisional certificates of registry as British ships.

If a Consul suspects that the shipping laws are being evaded, he may require the production of the official log-book or other ship documents, muster the crew, and demand explanations with regard thereto.

Every British ship not carrying passengers on entering a port must deposit with the Consul the agreement with the crew, indentures, etc.

The Consul superintends the engagement and discharge of British seamen abroad, investigates complaints made by crews as to the quality and quantity of the provisions on board, collects the property and arrears of wages, if any, of British seamen or apprentices dying abroad and remits them to the United Kingdom, and provides, out of public funds, for the maintenance and repatriation of seamen who are shipwrecked, discharged, or left behind. He issues money orders to seamen, receives deposits and pays withdrawals from the Seamen's Savings Bank, and conducts, at certain ports, the transmission of seamen's wages home.

Masters of passenger vessels are bound to give the Consul facilities for the inspection of the ship and the passenger list, and for communication with the passengers. The Consul may defray costs of maintaining and forwarding to their destination passengers taken off or picked up from wrecked or injured vessels.

The Consul makes inquiry on oath into offences committed by British seamen on the high seas or abroad ashore, and may send home the offender and witnesses by a British ship, at the same time reporting the facts to the Board of Trade.

He may detain a foreign ship which has caused injury to a British vessel until satisfaction or security therefor has been given, and when a salvage claim is made against a British vessel he takes evidence as to the services rendered and the remuneration claimed, and endeavours to effect a settlement.

Much notarial business is imposed on Consuls, partly by statute and partly by the request of private parties, and consists largely in taking declarations relating to the registry, sale, mortgage, etc., of British vessels, and to other commercial matters.

In Morocco, China, Siam, Egypt, Persia, etc., British consular officers exercise extensive judicial and executive powers in connection with the consular courts established in those countries. T. G. G.

CONSULAR REPORTS, BRITISH. Prior to the year 1886 the reports of diplomatic and consular officers abroad on trade, finance, etc., were published by the Foreign Office only during the Session of Parliament, or shortly after its close, when a sufficient number had been received to make a fair-sized Blue Book. Under this system, a person requiring a particular report was compelled to purchase a volume containing much extraneous matter, possibly of no interest to him, and at a cost in excess of the value of what he required. Moreover, while one report might be printed and ready for publication, it had to wait till others were received in a sufficient number to make up a Blue Book. The value of the earlier reports was thus diminished by delay. In 1886, in view of these objections, it was decided to publish each report separately, both during the Session of Parliament and in the recess, and they were thenceforward issued promptly and at a price which rarely exceeds a few pence.

Ordinary Consular Reports are divided into two categories, "Annual" and "Miscellaneous." The former comprises reports on Trade, Finance, Agriculture, etc., annually required from His Majesty's missions and consulates abroad, the latter reports on subjects of general economic interest, either specially called for by the Secretary of State, or voluntarily submitted for publication by their authors. Between 1886 and 1906, 3739 Annual Reports and 655 Miscellaneous Reports were issued in the separate form. About 250 reports are published annually. Occasionally information is required from different countries on a specific subject, in connection with current legislative problems, etc. The replies are then all published together, thus consolidating the information in one book. Such collective reports are known as the "Commercial" series, *e.g.* the collection of reports respecting "Bounties on Shipbuilding, etc." (Commercial No. 4, 1901). Annual Reports are intended, when possible, to reach the Foreign Office on or about the 31st March following the year to which they relate. The majority of the reports appear between April and August. Vice-Consuls send their annual reports to the superintending Consul of their district, who forwards them, after revision, as annexes to his own report. Thus the report of the Consul-General at Smyrna covers also the reports of the Vice-Consuls at Adalia, Aivali, Mitylene, Rhodes, Samos, Scala Nuova, Scio, and Tenedos.

Consuls are required to divide their Annual Trade Reports into distinct sections in the following manner:—

1. *Trade and Commerce*, with special reference to: (*a*) The movement of trade in the articles in which British trades are principally interested; and similar information as to Indian or Colonial products or manufactures; (*b*) Openings for British trade. (*c*) The comparative progress, if any, of foreign competition, and the reasons therefor. (*d*) Commercial law or practice in regard to trade matters. (*e*) Trade regulations. (*f*) Local products. (*g*) The establishment or developments of new industries, changes in channels of business or in local financial conditions, due to legislative, monetary, tariff, or other causes. The course of market prices of staple commodities should be noted.
2. *Shipping and Navigation.*—Returns of British, foreign, and coasting ships, matters relating to ports and harbours, alterations in dues, shipbuilding, return cargoes, facilities for landing and embarking, average rates of freight, lights and lighthouses, etc., should be embodied under this head.
3. *Population and Industries.*—All matters relating to mines and mining operations, factories, employment, census results, rates of wages, and the public health, should be embraced under this heading.
4. *Other matters.*—Under this heading should be included information as to public works, new railways, roads, canals, bridges, telegraphs, etc., and other industrial subjects.

In important agricultural districts separate reports on Agriculture are required.

In the Agricultural Reports particular attention has to be paid to the nature and yield of crops, to the import and export of cattle, and other matters of interest to agriculturists. Mention must be made of any diseases that may appear among cattle, which, however, are to be specially reported at the time of their outbreak. The Miscellaneous Reports cover a very wide range of subjects, from the paper industry of Japan to the sea fisheries of Germany. During the past few years Consuls have reported on such matters as Japanese paper mills; the arms industry of Liège; the German paper industry; the chemical, metal, and other industries of Lyons; the condition of the Italian silk trade; the iron and steel exhibits at the St. Louis Exhibition; the coal industry of the United States; and on commercial instruction in Germany. These form a valuable addition to our commercial intelligence. With a view to improve the quality of Consular Reports generally, an arrangement was made in 1906 between the Board of Trade and the Foreign Office, by which newly appointed Vice-Consuls spend some time at the COMMERCIAL INTELLIGENCE BRANCH (BOARD OF TRADE) (*q.v.*), 73 Basinghall Street, E.C., in order to become acquainted with the kind of information needed by business men. In 1907, it was arranged that the Annual Reports should be edited from a commercial point of view, by a commercial expert at the Board of Trade, in order that their form should be serviceable to

business men. Consuls are also required to send important items of commercial information home without delay, by telegraph if necessary. In order to secure the prompt transmission of such information to commercial men, and without making it equally available to their foreign rivals (as would be the case if it were published in the press), the Board of Trade have established at their Commercial Intelligence Branch a special register of business firms to whom intelligence of the kind is sent direct as soon as received at the Branch. Any business man who subscribes for the *Board of Trade Journal* may have his name put upon the list, the Board of Trade reserving the right of rejection. Cases of urgency include information as to important contracts offered for tender, and important shipping movements or dock strikes in foreign ports.

A complete index to the Reports is published annually. The Reports and Index can be purchased, directly or through any bookseller, from Messrs. Wyman and Sons, Ltd., Fetter Lane, E.C. T. G. G.

COPARTNERSHIP. *Labour and Capital.* The Copartnership system of the South Metropolitan Gas. Co., referred to in the article on TRADE UNIONS AND STRIKES, is the largest system of this description existing in the United Kingdom. It will be of use to explain how this system grew up out of the plan of profit-sharing which had been in force in that company since 1889.

In that year simple PROFIT-SHARING (*q.v.*) was introduced to attach the employees to the company, and to give them an opportunity to improve their position in life and to make provision for the future. The whole bonus was payable in cash on a week's notice, but nearly half was left with the company at interest, and a small portion was invested in the company's ordinary stock. In 1894 the bonus was increased on condition that only one-half should be withdrawable, the other half to be invested in the company's ordinary stock. Thus shareholding by employees was established. The system was revised in 1901, and became so popular that in 1906, out of a bonus amounting to £43,962, the sum actually invested in the stock of the company was £41,683, the value of these investments being over £250,000, with deposits at interest over £55,000 and £24,500, invested in the purchase of houses—the total reaching the sum of £334,709. In 1896 and 1897 Acts of Parliament were passed to enable employee shareholders to elect directors, and in 1901 the original scheme for the election of workmen directors having proved satisfactory in working, it was renewed for nine years, and provision was made for the election of a director by the officers. These directors are elected by the 4998 employee shareholders whose stock is in their own names, besides those whose stock is in the names of the trustees. When the question of employee directors was first considered there was the fear that they might take a narrow view of their duties. Even the late Mr. Mundella, whose sympathies were strongly with the workmen, had this fear. He approved of the idea and wished to see the experiment tried, but he was not sure that workmen directors would take a broad view of their duties, consider all interests, and do their best for the company as a whole. There was the risk that they might regard themselves as simply the representatives of their class, and that there their duties began and ended. The directors and shareholders of the Metropolitan Gas Co. took that risk, and have had no cause to regret their action. Copartnership, as Sir George Livesey has said, is neither philanthropy nor charity, but business—or as a member of Parliament who adopted the system once said to him, "Business up to date,"—that is, the foremost and best method of uniting capital and labour. He continues, "The directors would not be justified in continuing the copartnership if an equivalent in hearty service is not given for the bonus, which must not be regarded as a gift to the employees," but that every man "is responsible for earning his share of the bonus."

Copartnership was established because the term "Profit-Sharing" did not truly express the predominating idea of the system, and also because simple profit-sharing—the distribution of an annual bonus in cash—has been found to be a failure, doing more harm than good, in fact, doing little good and much harm. Instead of encouraging thrift it did exactly the reverse, and instead of permanently benefiting the recipients it encouraged waste and extravagance. Unless any system permanently benefits, no good will be done. By investing the bonus in the stock of the company the position of the workman is improved. He becomes an owner of property, and has hope for the future and a feeling of security in the present. Sir George Livesey continues: "Partners in profits and losses and in responsibility is what we are aiming at. The last is obtained by the election of employee directors by the employee shareholders. In 1898 the workmen shareholders elected two workmen directors, and in 1901 the clerical shareholding staff elected a clerk as a director. These three sit on the Board, and take part in everything that comes before the Board just the same as the ordinary directors, with all-round satisfaction." The South Suburban Gas Co. (later the Crystal Palace District) have had an exactly similar and equally successful system in force since 1893, and in 1905 workmen directors were introduced, the choice of the men being the best possible, as in the case of the South Metropolitan. The Commercial Gas Co. introduced a similar system in 1901, which has met with the same success as the other two, but

they have not advanced to employee directors at present. The Chester and the Newport (Mon.) Gas Companies have introduced the system also with success, but they stop at the investment of the bonus in stock.

Schloss, D. F., *Report on Profit-Sharing*, Board of Trade (Labour Department) [C. 7458], 1894. — *Report on "Gain-Sharing,"* Board of Trade (Labour Department) [C. 7848], 1895.— Sir George Livesey, *Employers and Employed and Co-Partnership*. London: Walter King.—South Metropolitan Gas Company, *Co-Partnership Journal*.

COSSA, LUIGI (1831-1896), born in Milan, professor of Political Economy at the University of Pavia from 1858 till his death, was an economist to whom Italy is greatly indebted. He was educated first at the University of Milan and then in Germany under ROSCHER and STEIN, the former of whom influenced him strongly.

He was an indefatigable and ardent student of economic literature both past and present, both of Italian economists and those of other nations. The results of his studies are to be seen in his works, which are truly described as "noteworthy for the vast learning they contain, sobriety of expression, and temperateness and accuracy of method." His books have been translated into many languages, and one in particular, the *Introduction to the Study of Political Economy*, may be ranked as a classic.

Though it is by his books that Cossa is known to the world in general, it was by his personal influence as a teacher and a leader that he was valued in Italy. He was not only a brilliant and careful lecturer, but was always ready to help and encourage his pupils, inspiring them and exhorting them to labour. Though himself an adherent of the classical school, his sympathies were extended to all honest and industrious students no matter what method of thought they might have selected to follow. His principal works are:—

Guida allo Studio dell' Economia Politica, Milan, 1st ed. 1876. English translation entitled *Introduction to the Study of Political Economy*, 1892.—*Primi Elementi di Economia Politica*, Milan, 1st ed. 1876.—*Primi Elementi di Scienza delle Finanze*, — *Saggi di Economia Politica*, Milan, 1st ed. 1878.

[See *Economic Journal*, vol. vi., London, 1896.— *Handwörterbuch der Staatswissenschaften*, giving complete list of writings, vol. iii., Jena, 1900.]

COTTERILL, CHARLES FOSTER (earlier half of 18th century), criticised the theories of Ricardo in his *Examination of the Doctrines of Value*. He followed the arguments of Samuel BAILEY (*q.v.*), and opposes to the labour theory the cost of production theory of value.

The full title of his book is *An Examination of the Doctrines of Value as set forth by Adam Smith, Ricardo, M'Culloch, Mill, the author of A Critical Dissertation, etc., Torrens, Malthus, Say, etc., being a Reply to those Distinguished Authors*, London, 1831. [See Prof. E. R. A. Seligman "On some Neglected British Economists" in the *Economic Journal*, London, 1908.]

CRAIG, JOHN. In addition to the notice of Craig, vol. i., we may mention that his *Elements of Political Science* contain an exposition of the futility of Adam SMITH'S distinction between productive and unproductive labour. Craig never accepted the fundamental tenets of the economics of RICARDO. He does not believe that wages are fixed by the standard of life, and he is "opposed to the doctrine that wages and profits must vary inversely to each other." "Craig is the first English economist to emphasise the connection between value and utility, to disclose the fallacy of the supposedly necessary opposition between profits and wages, and to dwell on the analogy between the revenue from land and from capital."

[See *Economic Journal*, London, 1903.]

DANSON, J. T. (1817-1898), a man of great versatility and varied experience, wrote on many economic questions, among them on our colonial policy, strongly setting forth the need of controlling colonists in their dealings with natives and with unappropriated land. He also wrote on our maritime trade both in peace and war, a subject he was conversant with through his connection as underwriter with the Thames and Mersey Marine Insurance Company. For a short time (1875-76) he lectured at Queen's College, Liverpool, on Political Economy—his lectures, almost homely in their simplicity, being published first as *Eleven Short Lectures on the Political Economy of Daily Life*, 1876, and afterwards forming the basis of one of his most important works, *The Wealth of Households*, 1886. Danson also assisted Thomas TOOKE in the fourth volume of the *History of Prices*, the help he gave being warmly acknowledged in the Preface to that volume. He practised for a time as a barrister, and had some experience in journalistic work and in farming.

Danson also wrote on the accounts of the Bank of England, *Journal of Statistical Society*, 1847. — *Observations on the Speech of Sir William Molesworth on Colonial Expenditure and Government*, 1848.—*Notes on the Pilotage of the Port of Liverpool*, 1871.—*The Underwriting of 1872*, 1873.—*Of the proposed Legislation touching Maritime Contracts*, 1876.—*Underwriting in England, France, and America during the last three Years*, 1883.—*Underwriting of 1883-84 in England and Abroad*, 1885.—*Our next War in its Commercial Aspect; with some Account of the*

Premiums paid at Lloyd's from 1805 to 1816, 1894.—*Our Commerce in War and how to protect it*, 1897.

DAVIDSON, JOHN (died 1905), professor of Political Economy in the University of New Brunswick, Canada, was educated at the Royal High School, Edinburgh, and at the University of that city. He graduated M.A. in 1891 and D.Phil. in 1897. In 1892 he was appointed professor of Philosophy and Political Economy in the University of New Brunswick.

His first published work was *The Bargain Theory of Wages*, 1898, which contains a criticism of the wage doctrines of the 19th century, and a statement of the theory which the author himself held. There are two limits to the value of labour, the superior limit (determined by the employer's estimate) and the inferior (determined by the labourer's estimate). These limits "are not absolutely fixed; but, within the undisputed and permanent frontiers, each is comparatively free from the danger of aggression." The exact rate between these limits at which wages will be fixed "is determined by the comparative strength of the bargainers." The mobility of labour, trade unionism, and the methods of industrial remuneration, are then examined as factors in the determination of this rate. In this section the author argues that immigration is a consequence rather than a cause of prosperity.

In 1900 was published his *Commercial Federation and Colonial Trade Policy*, in which he describes England's commercial policy towards her colonies since the treaty of Paris, and examines the present commercial relations of the mother-country with the rest of the empire. He concludes that the two proposals, free trade within the empire, and preferential treatment for the Colonies in the English market, are impracticable. The English Government, however, should discriminate against the foreigner, and stimulate colonial trade by granting "subsidies to freight steamers running between England and colonial ports."

Professor Davidson also contributed articles to the *Economic Journal* on "Canadian Preferential Tariff," 1900, and "Financial Relations of Canada and Provinces," 1905. At the time of his death "he had almost completed a history of the Scottish staple, which, from the fulness of treatment was practically an economic history of Scotland for the period covered." J. H. J.

DIRECTORS, LEGAL DUTY OF. The liability of directors with regard to prospectuses has been modified by the Companies Acts 1900 and 1907. Section 38 of the Companies Act 1867 was repealed by the Companies Act 1900, and every prospectus must now disclose everything which it can possibly concern the recipient to know in order to determine whether he will or will not apply for shares or debentures in the company. A director who is responsible for the issue of a prospectus which does not contain the statutory particulars is liable to an action for damages at the suit of any person injured by the non-compliance, and is also guilty of a misdemeanour. The director may escape liability by proving that he was not cognisant of a matter which was not but ought to have been disclosed, or by proving that the non-disclosure arose from an honest mistake of fact on his part.

It does not appear that directors incur any liability by failure to file the statement in lieu of a prospectus required after July 1, 1908, in the case of certain companies which do not issue a prospectus. (See PROSPECTUS.)

Directors are liable to penalties if they fail to comply with the statutory provisions relating to the filing of the prospectus, the return of allotments, commencement of business, registration of mortgages, and other like matters connected with the management of the company.

By the Companies Act 1907, sect. 32, the court may, in any proceedings against a director for negligence or breach of trust, relieve the director in whole or in part of his liability, if it appear that the director has acted honestly and reasonably, and ought fairly to be excused.

A. A. U.

DOCKS. Since the article on docks in the first volume of this Dictionary was written in 1894 (see DOCK), not much progress in the important parts of the dock system of the country has to be chronicled. Some additions to the dock accommodation at Swansea, for the fishing at Grimsby, a new quay on the Humber for the traffic between Hull and Zeebrugge, a new wharf at Newport, South Wales, new docks at Southwold to assist the herring fishery, may be mentioned with other works of the same description. A considerable development has taken place in dock accommodation at Bristol. In 1894 this was stated as being 108 acres. At the present time, including the works in course of construction, the accommodation is 144 acres. The Royal Edward Dock will accommodate vessels much larger than any now (1907) afloat. The railway connections of the dock are very complete, and quick-working hydraulic cranes and grain elevators afford exceptional facilities for the loading and quick despatch of cargoes of all descriptions from grain, ore, to green fruit, etc. At Southampton considerable improvements have been effected. The depth of water available and the quay accommodation have been increased. Two very fine graving-docks are provided, and the arrangements for dealing with cargoes, both for import and export, have been greatly improved.

One of the most important questions for the prosperity of the trade of England—namely, the development of the Port of London—has remained for several years in abeyance, through the inability of those concerned, who include

authorities as different in character as the managers of the Docks Companies, the wharfingers, the shipowners, the London Corporation, the Thames Conservancy Board, the London County Council, and the Government, to come to an agreement on the many questions included. The speech of Mr. Lloyd George, the President of the Board of Trade, in the House of Commons, on the London Port and Docks Bill, on April 23, 1907, showed the enormous number of interests concerned, and the difficulty of arriving at a decision on the course to be followed. As this cannot be reached during the present year, it will be impossible for us to give any history of the solution of the many difficulties involved in bringing the riverside arrangements of the Port of London, the harbour which deals with the most important trade of the world, up to the requirements of the present time. We must, however, refer to the enormous injury to the trade of the country caused by the delay which has practically lasted since the Royal Commission of 1902. The urgency of the problem may be understood from the fact that during this period of delay the tonnage using the Port has increased yearly by about 1,200,000 tons. The work is carried on under great difficulties, and it is understood that it would be practically impossible to establish any new line of steamers from the Port of London at the present time. Meanwhile the tonnage at the ports of Rotterdam, Hamburg, and Antwerp, three of the principal competitors of London, has increased in a far greater proportion, with greatly improved methods of dealing safely and rapidly with the goods consigned. Mr. Lloyd George's journey (1907) to these three ports for the purpose of ascertaining by a personal inspection and investigation whether modern shipping requirements can be best met by riverside quays or by the old system of docks and warehouses in combination, gives the promise of careful attention being given to the subject. Closer communication with the entire railway system of the country is essential. The whole system of the Port of London requires to be thoroughly overhauled and brought up to modern conditions. We will content ourselves here with recording the principal requirements of the Port, as stated in the *Times* of April 15, 1907 :—

The Port of London. "The chief requirements of the Port which should be kept in view are :—

(1) A 35-feet channel up to Gravesend. A 30-feet channel from Gravesend up to the old London and India Docks at least, and the full width of the river wherever possible.

(2) New wet docks with a *minimum* width of entrance 100 feet, a *minimum* depth 40 feet, and capable of affording berthage to at least eight of the largest liners, with all necessary quay space, sheds, etc.

(3) Three dry docks, with a *minimum* width of entrance 100 feet, a *minimum* depth over sill at low water 40 feet, and 750 feet to 1000 feet in length, all fully equipped.

(4) The existing docks to be brought up to date, with plenty of quayage and shed accommodation, and every appliance for dealing with cargoes with the greatest possible despatch."

DOWELL, STEPHEN (1833-1898), for many years Assistant Solicitor to the Board of Inland Revenue, wrote a useful work on the *History of Taxation and Taxes in England*, a subject with which, through his official duties, he was thoroughly familiar. Of the four volumes into which the work is divided, the first two are devoted to the history of taxation as connected with the general current of English political events, arranged in periods, extending from the days of the Romans in Britain to the year 1885, while in volumes iii. and iv. the different taxes taken separately are discussed and grouped under their several headings, as Direct Taxes, Taxes on Persons, on Property, etc. A second edition of the *History* appeared in 1888.

Dowell also published : *History and Explanation of the Stamp Duties*, 1873.—*The Income-Tax Laws in force in the United Kingdom*, 1885.—*The Acts relating to the Tax on Inhabited Dwelling-Houses*, 1893.

DROZ, NUMA (1844-1900), a Swiss statesman of considerable distinction, was born of humble parents. By his own efforts he raised himself to the position of a teacher at the University of Neuenberg, and at a very early age edited a liberal newspaper. Turning his attention to politics, he quickly rose to occupy high positions in the government of his country. He was for a time Minister of Agriculture, and as Minister of Trade did good service to his country in assisting to draw up many of the commercial treaties with which Switzerland is concerned. His sympathies lay in the direction of Free Trade.

Among other things, he wrote a treatise, *L'instruction civile*, and *Essais Économiques*, 1896. Paris.

[See *Economic Journal*, London, 1897, p. 409.]

DUNBAR, CHARLES FRANKLIN (1830-1900). Born at Abingdon, Pennsylvania. Died at Cambridge, Massachusetts. Graduated from Harvard College in 1851. Engaged for short time in business, then, because of failing health, spent a year in farming. He then studied law and was admitted to the bar in 1858. From 1859 to 1869 he was associate editor of the *Boston Daily Advertiser*, making it one of the leading papers in New England. In 1871 he was made Professor of Political Economy in Harvard University, but spent two years in study and travel in Europe before entering upon the professorship. From 1876 to 1882 he was Dean of Harvard College, and in 1890 became the first Dean of the Faculty of Arts and Sciences, serving in that capacity until 1895. In 1886 he became the first

editor of the *Quarterly Journal of Economics*. Professor Dunbar was the second president of the American Economic Association, but never made any presidential address. He wrote comparatively little, the only book from his pen published during his life being *Chapters on the Theory and History of Banking*, 1891, which had been privately printed in 1885. This was an eminently clear and sensible text-book on the subject, which has been so widely used in the American colleges as almost to become a classic. A second edition was published after his death in 1901. A number of miscellaneous articles on banking and public finance were collected into a volume entitled *Economic Essays*, and edited by O. M. W. Sprague in 1904. Professor Dunbar also published in 1891 a volume entitled *Laws of the United States on Currency, Finance, and Banking*, which was a reprint of the statutes on the subjects, condensing, however, the less important sections. Until the publication by the Government in 1895 and subsequently of all of the laws of the United States relating to loans, paper money, banking, and coinage, this compilation of Professor Dunbar's was much used. E. R. A. S.

ECONOMIC LIBRARIES.

The Goldsmiths' Company's Library, p. 720; Manchester Libraries, p. 722; Foreign Office and other Libraries, p. 723; United States Libraries, p. 723; John Crerar Library, Chicago, p. 723.

THE GOLDSMITHS' COMPANY'S LIBRARY OF ECONOMIC LITERATURE. This is a collection of books and tracts intended to serve as a basis for the study of the industrial, commercial, monetary, and financial history of the United Kingdom, as well as of the gradual development of economic science generally. The first impulse to the making of the collection, which was formed by Professor H. S. Foxwell, came from his predecessor at University College, the late Professor Stanley JEVONS, about 1875, and the first book purchased for it was a copy of Lardner's *Railway Economy*, bought at Mr. Jevons's suggestion from a bookstall—Mr. Jevons observing that this book had led him to begin his famous researches into the mathematical theory of economics.

The collection thus commenced at first aimed at the provision of material for a thoroughly historical edition of the *Wealth of Nations*. Afterwards Arnold Toynbee's special interest in the INDUSTRIAL REVOLUTION (*q.v.*) led to the collection of material for his use covering the period 1760-1860. Later, again, the evils resulting from the demonetisation of silver became marked, and called attention to currency and banking history. The library having thus assumed a general character, efforts were made to make it fairly complete so far as English history was concerned, and in some aspects at least fairly representative of foreign movements. After thirty years of labour the catalogue contains over 30,000 distinct entries, without taking account of a mass of political literature acquired incidentally, and a large collection of original Acts of Parliament of special economic interest. Very much, of course, remains to be done; thirty years more might well be spent on the work. From this account of its origin the stronger points of the collection will be inferred. The history of economic thought is practically complete so far as England is concerned, and very full so far as concerns the French economists before and during the Revolutionary period. No attempt has been made to deal in the same thorough way with the literature of other European countries; but there is a fair collection of works in Italian, Spanish, German, Dutch, etc.; and American economics is well represented.

To come more to detail, the following subjects, among others, will be found fully illustrated: the early history of English Trade, Companies, and Colonies; Mercantilism and Colonial Policy; the Navigation Laws; Guilds and the Towns; Fairs and Markets; Interest and Usury; Early Banking; the history of Agriculture, Enclosures, Commons, Allotments; the rise of foreign trade, especially of the East Indian, and the French and American trades; the Agrarian Revolution of the 18th century; growth of English industries; Machine Industry, the Industrial Revolution, the large towns and their problems; Municipal and Political Reform; Factory Legislation; Trade Unionism, Friendly Societies and Savings Banks; the Co-operative Movement; Education; the condition of the people generally; Socialism in all its forms—Owenism, Chartism, the English socialistic movements generally, indigenous or imported; French, German, and American Socialism; Emigration and Population movements; the history of the Poor Law, and especially of the New Poor Law of 1834; the question of Land Tenure in England, Scotland, and Ireland; Tariff policy in various countries, especially the Anti-Corn Law agitation, the German Zollverein, the protectionist reaction in Europe and America after the Peace of 1815; Financial policy and tax systems: the development of communication, roads, posts, canals, railways, and telegraphs; the growth and changes of Foreign Trade; Competition, its modern developments, abuses, and regulation; the rise of great industrial and commercial combinations; the modern developments of Banking; the history of currency and various currency systems; the history of prices and wages; index numbers; international monetary policy; the great markets for securities and for produce; the history and theory of statistics; the mathe-

matical theory of economics; public control and the economic functions of the State generally; economic criticism and social philosophy. It may be added that those interested in local history will find in the library books or tracts printed in almost every part of the British dominions at home or abroad.

In the selection of literature for the library the main purpose kept in view has been to make it historical and catholic. No pains or expense have been spared to ensure that, as far as possible, all sides in a controversy should be represented. It therefore differs widely from such a collection as that of M'CULLOCH, who excluded, with rare exceptions, all books which did not come up to his standard of orthodoxy. The object has been to mirror opinions, not to judge them. If, for instance, the mercantilist view was predominant in the early 18th century, it will be found predominant in the library over that period, and so on. But the dissentient opinions are as faithfully represented as the fashionable ones; no standards have been imposed. If any partiality has been shown, it has been in the desire to put in evidence the scanty and obscure literature which gives a clue to the opinions of the almost inarticulate masses of the people, literature which will probably have for future ages a very special and pathetic interest. Whatever the subject in question, a collection made on these lines would necessarily include a large quantity of tracts and fugitive publications. But in economics, more perhaps than in any other subject, its historical sources are largely of an occasional, non-formal character; and the brief contributions of practical men are often of much greater value than the more systematic disquisitions of professed writers. Hence there is an exceptionally large proportion of pamphlets and tracts in the library, not much less in number than 20,000; among which may be included a large collection of extracts from reviews. The opinions of Dr. Johnson and Macaulay as to the value of such literature are well known. It is to no one of more value than to the historian of economics.

The library also contains a large number of broadsides, many of them from the fine collection of Lord Lauderdale. There are also hundreds of MSS., many of them of great interest, and a large number of autograph letters of economists and statesmen. Among other collections mention may be made of the biographies, the portraits, the prints, some examples of paper moneys, etc.; and the bibliographical collection, which includes a copy of the Catalogue of the Massie Library, the most remarkable collection of English economic literature previously formed.

The main purpose of the library being to facilitate historical research the contents have in general been arranged chronologically, with subject classification under each year where indicated. But the ordinary forms of catalogue are also in process of preparation. The same arrangement, so far as may be, is observed in the shelving and disposition of the books, but many departures from it have been found necessary. Before 1800 only one general chronological arrangement is adopted for each size—folio, quarto, octavo, and duodecimo; after 1800 special subjects have separate chronological arrangements in special cases. Very long series, and certain classes of books not likely to be so often consulted, will generally be found in the galleries.

Taken as a whole the Goldsmiths' Library is specially remarkable for the condition of its books. Books on Trade, Finance, and Social History, which were not considered to be "literature" by any one before the appearance of the *Wealth of Nations*, nor by most people till a century later, are usually found in bad condition both internally and externally, not having been preserved in good libraries. Those in this collection are for the most part picked copies. Many are presentation copies to the statesmen and magnates whose libraries are referred to below. Many are in sumptuous English and French morocco bindings of the 18th, and in less number of the 17th centuries. The condition of the French 18th century books is particularly fine, most of them being in original extra bindings. Where rebinding was required, the sound general rule has been observed of never binding together what were published separately; and generally everything has been done to facilitate historical and comparative research, which seems the main *raison d'être* of special collections.

The exceptional condition of the books is largely explained, as hinted above, by their *provenance*. Owing to agricultural depression and other well-known causes, the period subsequent to 1875, over which their collection has extended, has been specially remarkable for the number of old and famous libraries brought to the hammer. The following list contains the names of some of those libraries which deserve mention here for the importance of their contributions to this collection:—

The Sunderland, Clandon, Osterley Park, Hamilton Palace, Duke of Sussex, Duke of Cambridge, Duke of Buccleuch, Duke of Portland, Earl of Lauderdale, Stanesby Alchorne, George Chalmers, Gunning, Sir Robert Peel, Lord Monteagle, Agar-Ellis, Lord Prestongrange, Visct. Bruce of Ampthill, Gibson Craig, James Crossley, Frere of Roydon, General Wilson, Gardyne, Lord Ripon, Speaker Onslow, Lord Ashburton, Pleydell Bouverie, Sir John Fenn, Lord St. Leonards, Sir R. C. Hoare, Cornelius Walford, Capelle, Pole-Carew, Trentham; and amongst economists and reformers, Arthur Young, Dean Tucker, Adam Smith, Ricardo, Colquhoun, Cobbett, Francis

Place, Quetelet, Joplin, Baring, Senior, William Allen, Oastler, Sadler, Kydd, Lovett, Truelove, Considérant, Paul Janet, Sabatier, Roscher, Col. Hyde, Ruding, Cliffe Leslie, Bonamy Price, Smiles, Hyde Clarke, Gerritsen, etc., not to mention the names of many living donors. Indications of *provenance* have been as far as possible preserved in the books themselves, and in the shape of book-plates, where it has been necessary to break up the original volumes.

It will be obvious that a library of this kind could not be formed except at a very heavy expense. This expense, always a strain on the modest income of an English professor, became insupportable in view of new demands on that income; and, accordingly, with much regret, arrangements were made to accept an offer of purchase on behalf of a great American library. But the completion of the sale was very generously allowed by the trustees to stand over for six months, ending June 30, 1901, to give opportunity to arrange an English purchase. After various abortive attempts to effect this, the Council of the Royal Economic Society made an appeal to the public in *The Times* of June 25, 1901, supported in a vigorous leader of the same date. Two days later an offer of purchase was received and accepted from the Worshipful Company of Goldsmiths; and the collection was thus retained for the country whose history it had been designed to illustrate.

The Goldsmiths' Company subsequently presented the library to the reconstituted University of London, to be deposited in its central building, now at the Imperial Institute, South Kensington. The transfer of the collection began the next year, and is still in process. The greater proportion of the bound volumes are now at South Kensington, but the bulk of the pamphlets have yet to be dealt with. There is a rough catalogue of nearly the whole collection; but a great deal of work has yet to be done, both in cataloguing and in completing and binding the books; and fresh accessions are continually being made by the generosity of the Goldsmiths' Company, who have also made large gifts for binding and for library furniture.

In concluding this notice, it is only the barest justice to mention the very large share taken in the laborious work of compiling, cataloguing, and generally perfecting the collection, by the assistant-librarian of St. John's College, Cambridge, Mr. E. W. Lockhart. Without his very skilled, intelligent, and untiring help, the collection could never have attained its present extent or degree of excellence. His name should always be associated with the Goldsmith's Economic Library.

All communications respecting the use of the Goldsmiths' Company's Library of Economic Literature must be addressed to the librarian at the University of London. H. S. F.

Economic Literature in the Manchester Libraries. Manchester is unusually well provided with important libraries. Humphrey Chetham, who died 1653, left the bulk of his estate for the foundation of a blue-coat school and public library which now contains 60,000 volumes. Although no special feature has been made of political economy, it contains some of the earlier books, especially of the 18th century, and has a remarkable collection of broadsides presented by J. O. Halliwell-Phillipps, who printed a catalogue of them in 1851. This is merely a numerical list devoid of either alphabetical order or classification. The collection contains much unused material for the history of commerce and industry. The Portico Library and Newsroom, which contains 60,000 vols., is a proprietary institution owned in shares and dates from 1806, and includes some of the modern literature of political economy. A remarkable collection of pamphlets formed by Charles Leigh of Adlington contains many items of interest respecting the affairs of the 18th century. The Athenæum, founded in 1835, largely by Cobden's influence, is essentially modern, and contains 21,000 vols. The largest collection is that of the Free Library, which was the first founded under the Public Libraries Acts, and was opened in September 1852. It consists of a central library and nineteen branches and newsrooms. The Reference Library contains 155,000 vols., and from the beginning special attention has been paid to the collection of material relating to the literature of political economy in its widest sense. A complete set of the *London Gazette* may be named. The collection on trade formed by Nicholas Magens, the banker, at the end of the seventeenth and beginning of the eighteenth centuries was acquired in 1852, with the exception of some Americana, and forms the foundation of one of the largest economical collections in the country. To this have been added the tracts collected by Fullerton of Carstairs, by Sir Edwin Chadwick, and others. In recent years special attention has been given to the literature of municipal institutions, but the collection is also rich in material for the history of trade, the organisation of labour, and the fiscal controversy. The librarians from the commencement have paid special attention to the collection of pamphlets, and this has been facilitated by the fact that Manchester has been a centre of the active discussion of economic problems. The library of the Manchester Statistical Society, the oldest in the kingdom, now forms part of the city library, which has also absorbed the foreign library. The collection of parliamentary papers and official publications is large, and foreign and colonial documents have been freely added. Another strong point is the extensive series of periodical publications in long sets, including, for instance, the *Journal des Économistes*. This feature is also seen in

the library of the Manchester Literary and Philosophical Society, which was founded in 1781, and, chiefly by exchange of publications, has formed a library which contains the issues of the most important academies and learned societies of the world. It contains 29,700 vols. in a house which dates from the early years of the 19th century, and has memories of Thomas Percival, John Dalton, and other famous men. The Law Library, whilst formed only for professional purposes, contains 12,000 vols., including some books which are of importance for the history of certain branches of economics. The University of Manchester has developed from the college founded under the will of John Owens, a wealthy merchant, who died in 1846. The library now contains 100,000 vols. and includes the important collection made by William Stanley JEVONS, who held the chair of Political Economy in Owens College before his removal to London. His books extend to 2394 volumes, and form about one-half of the University's economic section. In connection with the Faculty of Medicine there is the library of the Medical Society (established 1834) extending to 32,000 vols., and containing many books, some of great rarity, dealing with topics common to medical and economic science. The latest addition to the literary institutions of Manchester is the John Rylands Library, founded in 1899 by Mrs. Enriqueta Rylands in memory of her husband, who was one of the merchant princes of the city. It contains 110,000 volumes, and by the purchase of the Althorp Library it has become one of the greatest storehouses of early printed books and of the Italian literature of the Renascence—departments in which the student of economics may find some fresh fields of research.

Although there is no organic connection between the various Manchester libraries, except that the Medical Library is housed in the University, there is much unofficial co-operation, so that any one engaged in serious research will easily be guided, when necessary, from any one institution to all the others. W.E.A.A.

THE FOREIGN OFFICE is in possession of a very interesting Library containing a considerable number of works of reference dealing to a large extent with the Colonies, and also with the condition of other countries of the world, as existing in the first half of the 19th century and down to a somewhat later date. A very complete index was added by Mr. W. M. Bucknall at the time he was the librarian.

This Library was formed by the Board of Trade before the year 1866. It would be a useful thing if it were returned to the office where it was originated and brought up to date, and we are glad to record that a suggestion to this effect has recently been made. Many of the works it contains are rather rare. The Royal Statistical Society and the London School of Economics and Political Science both possess valuable collections of economic works.

UNITED STATES. The most important libraries bearing on economics in the United States besides the Crerar and Newberry Libraries in Chicago are as follows:—

1. The New York Public Library on the Astor, Tilden, and Lenox Foundation (librarian, Dr. John S. Billings) is believed to have the best collection of economics of any public library in the world outside the British Museum. This is certainly true of American economics.

2. The Congressional Library at Washington, which has added immense stores in recent years.

3. Of the university libraries; among these the most important in economics are, in order mentioned, Columbia, Harvard, and on a level Yale, Johns Hopkins, and Chicago.

4. The University of Pennsylvania has the old collection of Carey and Baird, which is strong in eighteenth-century English literature. (See H. C. CAREY.)

5. The Boston Public Library is a very fine one.

6. The Wisconsin Historical Society Library is also very strong.

7. Of private libraries, that of Professor Seligman of Columbia University contains about thirty thousand volumes in economics. It is especially strong in the early English literature and in the early French literature. Professor Seligman has also devoted great attention to the literature of labour and socialism, having even as to England a number of titles not found in the bibliography of Professor Foxwell. The nineteenth-century pamphlet literature in this library is especially strong in American finance, that is, money and banking, American free trade and protection, and American labour. It contains also a very strong collection of English nineteenth-century pamphlets from 1810 to 1850, on money, labour, and the corn laws, and a speciality has been made of books and reports on taxation.

On socialism this library is said to have a more complete collection of the German socialists, including MARX, RODBERTUS, and LASSALLE, than is to be found in any German library, with a great mass of pamphlets on the finances of the French Revolution and on the socialistic movements in France, especially 1830 and 1848.

It contains also a good collection of the chief German, Italian, Spanish, and Russian works on economics.

As regards English literature, it has every work mentioned in M'Culloch's bibliography, and many items which he does not mention.

JOHN CRERAR LIBRARY, THE, CHICAGO. The John Crerar Library, the latest established of the free public libraries of Chicago, owes its existence to the bequest of the late John Crerar, for many years a prominent merchant of the city. The endowment realised from this bequest

is conservatively estimated at $3,400,000 (say £680,000), producing an annual income of over $160,000 (say £32,000).

The library was incorporated 12th October 1894, organised 12th January 1895, and opened to the public 1st April 1897. Its character and scope as a free public reference library of scientific literature were determined by the directors from their personal knowledge of the views and wishes of the founder, and after consultation with the governing boards of the other public libraries of the city.

Its field may be defined as that of the natural, physical, and social sciences, and their applications. In view of Mr. Crerar's desire that the books and periodicals might be "selected with a view to create and sustain a healthy moral and Christian sentiment in the community," the directors have always regarded the social sciences as one of the most important portions of this field. For convenience in dealing with appropriations, statistics, etc., the books are divided into six departments: general works, social sciences, physical sciences, natural sciences, medical sciences, and applied sciences.

On 1st January 1907 the department of social sciences had the largest number of volumes, in round numbers, 55,000 out of a total of 200,000; the second largest number of pamphlets, 20,000 out of 65,000; and received currently the second largest number of periodicals, 500 out of 2500.

The department of social sciences has eleven divisions: general works (including sociology), ethics, religion, statistics, political science, political economy, law, administration (including public documents), charities and correction, education, commerce and communication, manners and customs (including folk-lore and the woman question). Of these the most important is political economy, with about 16,000 volumes and 12,000 pamphlets. Then follow administration and documents, 14,000 volumes and 1000 pamphlets; general works, 6500 volumes; education, 5000 volumes; and manners and customs, 3500 volumes and 3000 pamphlets. While commerce and communication as a division of the social sciences is credited with only 2500 volumes, it might be said that if the works dealing with the technical and administrative sides of the subject were included, the number would be more than doubled.

It has been the purpose of the directors to develop the Library symmetrically, and by the addition of the latest works and the completion of the files of periodicals, rather than by purchases *en bloc*. Nevertheless they have not hesitated to take advantage of exceptional opportunities. Thus they were ready to purchase the collection of Prof. H. S. Foxwell on economic history (see p. 720), had it not been kept in England. Of these special acquisitions the largest and most important, except the transfer of the medical department of the Newberry Library, is that of the private library of the late Mr. C. V. Gerrifsen, of Amsterdam. It consisted of some 18,000 volumes and 15,000 pamphlets on social and economic subjects, being especially full on finance, banking, labour, and socialism. It included a collection, formed by Mrs. Gerritsen (Dr. Aletta H. Jacobs), of nearly 6000 volumes and pamphlets on the social, political, and legal status of woman. A printed catalogue of this part of the library, complete to 1900, was exhibited at the Paris Exposition of that year, under the title of *La femme et le féminisme*, and received a diploma of honour.

The private library of Professor R. T. Ely, of the University of Wisconsin, was acquired in 1902. It covered the whole of political economy, but was especially strong in works dealing with American labour and social movements. It consisted of some 6000 volumes (600 of which were bound volumes of labour periodicals) and 4000 pamphlets.

The income of a bequest from its second president, the late Huntington Wolcott Jackson, is applied to the formation of a collection on constitutional law. The total number of volumes in this collection is now about 350.

In public documents the Library is rather stronger than might be expected, considering the short time it has been established. It is a "designated depository" of the Congressional documents, a special depository of the Congressional documents, a special depository of the publications of the U.S. Geological Survey, and one of three depositories of all bills, resolves, and acts of Congress since 1901. Many state and some city documents have been acquired. Of foreign documents it has all the parliamentary papers of Great Britain since 1896, and most of the earlier ones on economic subjects; a nearly complete set of the parliamentary papers of Canada; a very full set of those of the Netherlands; a good set of those of Sweden; an unusual collection of French documents of the 15th to the 18th centuries on economic subjects; many serial official publications of Austria, France, and Germany; and a noteworthy collection of Australian documents dealing with the labour question, presented by the late Henry D. Lloyd.

In periodical literature also the Library is stronger than might be expected. Many of the 500 periodicals on the Social Sciences which are currently received are represented by complete sets, and in addition the 8000 volumes of periodicals and society transactions classed as general works offer much to the student of the social sciences. The publications of over one hundred such societies are currently received, and complete or nearly complete sets are available of about half of them.

As the public libraries of the city have adopted the policy of avoiding unnecessary duplication,

a union list of the serials in them was thought to be desirable. In 1901 the Chicago Library Club issued such a list, and the John Crerar Library has issued a supplement, the second edition of which appeared in 1906. The original list and the supplement give the location of 12,000 serials in nineteen libraries.

One other of the publications of the Library is of some general interest. The list of Bibliographies of Special Subjects gives not only the distinctly bibliographical works on each subject, but also the works which contain bibliographical material thought to be of value. The arrangement is systematic, and there are about 400 entries on the social sciences. C. W. A.

ECONOMICS, TEACHING OF.

General, p. 725; Cambridge (Economics Tripos), p. 726; Oxford, p. 729; United States, p. 731.

GENERAL. It is the main purpose of this article to describe the position of economics in the various universities other than Oxford and Cambridge, university colleges, and similar institutions in the United Kingdom. In the University of London Political Economy may be taken for the B.A., and there is an economic group for the M.A. There is also in the university a Faculty of Economics and Political Science (including Commerce and Industry), in which the degrees of B.Sc. and D.Sc. are granted. For the former candidates may present themselves for a pass or for honours. A more definitely commercial variant of the B.Sc. is at present under discussion by the university. Teaching in economics for the degrees of the University of London is provided in several institutions, of which special mention may be made of the London School of Economics (Clare Market), University College, King's College, and the Birkbeck Institute. The School of Economics was founded in 1895. In economic subjects its "appointed teachers in the University of London" number five, who deal respectively with Economic Theory, Statistics, Banking and Currency, Economic History, and Foreign Trade. There are other "appointed teachers" on such allied subjects as Economic Geography, and many lecturers in addition on general and special subjects. Instruction is given both in the day and in the evening. University College includes a professor (the chair was established in 1828, M'CULLOCH being the first occupant), an assistant professor, a lecturer on Statistics, and a lecturer on Commercial Methods. In addition the professor of Mathematics holds a statistical honours class. King's College has also a professor whose chair was not established until 1859, though lectures had been given for some time previously. At the Birkbeck Institute the present principal has taught economics for a quarter of a century. He is now assisted by a lecturer.

Closely related in design to the Faculty of Economics in the University of London (the first degree of which is B.Sc.) are the Faculties of Commerce of the University of Birmingham (see p. 711), of Manchester, and of Leeds (the first degrees of which are B.Com.). The first was founded in 1901, and the second and third at intervals of two years. At Birmingham the economic teaching is in the hands of a professor of Commerce (chair established 1901), and another of Finance, whose lectureship, created in 1902, was transformed into a chair in 1906. The course extends over three years, and can be taken only by day students. The same holds at Leeds, where the economic instruction is imparted entirely by one professor whose office was created in 1903. At Manchester, where attendances for three years are required in ordinary circumstances, and for four years when attendances cover less than seven hours a week, lectures held in the evening as well as those held in the day are recognised for the degree in Commerce. As in London, full courses of lectures are provided both in the day and evening. A professor of Political Economy and a lecturer on Economic History (first appointed in 1903), who assists also in other economic teaching, are responsible for the bulk of the instruction in Economics provided at Manchester, apart from Economic Geography, which is the subject of a distinct lectureship. The teaching of Economics at Manchester extends backwards for nearly half a century. Usually it was united with other subjects, but some years ago a distinct lectureship was instituted, and in 1901 the lectureship was transformed into a chair. In this university and at Birmingham and Leeds economic subjects figure in another faculty or other faculties than that of Commerce. At Manchester honours may be taken in the Faculty of Arts in Economic and Political Science, as they may also at Liverpool. At Liverpool a professorship, created out of an earlier lectureship in 1891, and a lectureship, added in 1907, exist in Political Economy, in addition to a lectureship on Geography. A School of Commerce, the course in which does not lead to a degree, is slightly connected with the Liverpool university, and in this school lectures are given on commercial methods as well as upon other subjects. A proposal to institute a degree in Commerce is now under consideration. At the University of Sheffield Economics and Mental and Moral Science constitute the domain of a lectureship created in 1897. The subject has a place in the curriculum for graduation. In the University of Durham Political Economy is a voluntary subject for the B.A. and B.Litt. Two persons are engaged in the teaching, but only two courses are offered.

In addition to the universities some mention should be made of the university colleges and institutions of similar standing in England.

Of University College, Bristol, Professor Marshall (professor of Political Economy at Cambridge) was the first principal, but after his retirement economics did not occupy a large place in the teaching of the college, until in 1901 a chair of Economics and Public Administration was created. There is, in addition, a lecturer in Economics, who has been holding small classes for some years, and doing the limited amount of work required until lately. In connection with the scheme for a University at Bristol, it is proposed to establish a degree in Public Administration and Economics or in "Commerce." At University College, Reading, the Professor of Mathematics and Economics (whose chair was created in 1907 out of a lectureship) devotes a limited amount of time to imparting economics for the commercial diploma granted by the college and for the London B.A. Courses in Economics are offered by the professors of History at the Royal Albert Memorial College, Exeter, and Hartley University College, Southampton, but practically no advantage is taken of them. At University College, Nottingham, an evening course is delivered by the professor of History. At Armstrong College, Newcastle-upon-Tyne, the lecturer on Philosophy used to be required to teach Economics also, but no lectures were given, and there is no provision of economic teaching to-day.

In all the universities of Scotland Political Economy may be taken as one of the subjects for the M.A. The group of honours known as Economic Science means Political Economy with either (*a*) Moral Philosophy, or (*b*) one of the history subjects of the honours standard, as supplementary subjects. At Aberdeen there is a lectureship in Economics established in 1905. At Edinburgh, where the staff is now one professor, whose chair dates back to 1871, and one assistant, made also lecturer on Economic History in 1904, the Court has decided to institute full courses in Economic History, qualifying for both the ordinary and honours degrees. When this is done, honours in Economic Science may be based entirely on a knowledge of economics. At Glasgow there is one professor (a lectureship founded in 1892 being replaced by a chair in 1896) who hitherto has engaged an assistant or assistants, and Economic History is taught, and work is done for both pass and honours. At St. Andrews one lecturer (the post was created in 1889) imparts all the instruction for pass and honours. University College, Dundee, now part of the University of St. Andrews, offers no economic teaching, though it did in the sessions 1885-87, when successful classes were held under the present professor at Glasgow. Usually in the Scottish universities, before the institution of separate posts, lectures on Political Economy were delivered by professors of allied subjects which sometimes were understood to include it.

The University of Wales comprises three constituent colleges, viz., Bangor, Aberystwyth, and Cardiff, and in the last two of these Economics is taught for graduation,—at Cardiff by an associate professor (work was begun by a lecturer in 1899), who devotes the whole of his time to Economic and Political Science, and at Aberystwyth by a lecturer who unites with this work some teaching in Philosophy. Political Economy may be taken as an intermediate subject and with Political Science for honours. At Bangor all that is attempted at present is an annual course of six lectures, on the George Rae foundation, on "Some aspects of Political Economy, with special reference to Banking."

As regards Ireland, Trinity College, Dublin, has enjoyed a professorship since 1832, in which year a chair was founded by Archbishop Whately, the occupant of which also teaches Commercial Law. Students are prepared in Political Economy for the examinations, pass and honours, of the Royal University of Ireland at the Queen's Colleges of Belfast and Cork. At the former there is one professor who also teaches Jurisprudence, and at the latter a professor of Mental and Social Science who delivers lectures on Political Economy.

From the above sketch it is evident that provision of instruction in Economics in the United Kingdom has received a distinct stimulus in the last dozen years, but the amount of work done, in respect both of the number of teachers of the subject and of the number of students, is still far inferior to that done in Germany and the United States. In Germany Economics figures in all the universities, and plays a leading part in some, and there are, in addition, four higher commercial schools, the kernel of the courses in which is economic. In the United States (see ECONOMIC TEACHING IN THE UNITED STATES) there are some specialised higher commercial schools, and in the departments of Economics of some of the most prominent universities, large staffs of teachers and crowds of students are to be found. In France the teaching of Economics is in a peculiar position. As it has recently received a place in the curriculum of the Faculty of Law the amount of work done is considerable, but in the Faculty of Law it is practically confined to preparation for prescribed examinations of a somewhat limited scope, and inasmuch as all teachers in this Faculty must be doctors of law, it tends at present to border upon Jurisprudence. Outside the Faculty of Law there are in France few teachers and few students. S. J. C.

ECONOMICS TRIPOS, CAMBRIDGE. The Tripos in Economics and associated branches of Political Science was instituted by the University of Cambridge in 1903 in order to give encouragement to an important form of liberal education, and at the same time to make special

provision for students who are proposing to devote their lives to the professional study of Economics, and for those who are looking forward to a career in the higher branches of business or in public life. And a curriculum of education, which is fairly complete so far as the main requirements go, was set up soon after. There are, however, several gaps which could be advantageously filled, if adequate funds were forthcoming.

No attempt is made to fill the mind of the student with a mass of technical information connected with the particular branch of business in which he is to be engaged. Such instruction may perhaps suitably be given in commercial schools to lads who are expecting to begin to earn their livelihood at an early age; and it may be given to even better purpose in the evening classes of universities and colleges in great industrial centres, for the benefit of those already engaged in business. Cambridge is not well placed for this work. But she has exceptional facilities for strengthening and developing the mental and social faculties of those who in after-life will bear the higher responsibilities of business; and who are prepared to work hard. The curriculum aims rather at giving an education which will enable men in the higher posts of business and of the public service to meet the ever-increasing demands on their intelligence and power of going to the root of difficult questions. For while there is in some directions a tendency towards increased specialisation in the work of subordinates; there is an even more marked tendency towards greater breadth and diminished specialisation in the work of those who are responsible for the main decisions in the conduct of large affairs.

So much is this the case that a man may be more fitly equipped to be a leader in business by an education which has braced his mind to hard work in subjects that have no connection with it, than if he had occupied himself with an enervating form of technical instruction, however directly that might bear on his after-work. But, provided the studies be themselves of a truly liberal character, the closer their bearing on his after-work, the more active is his interest in them likely to be during his stay at a university and in after-life. To a colliery manager who has made a thorough study of geology the shafts and galleries of a mine are a scientific museum and laboratory: his mind grows with his work, and he may increase the world's wealth of knowledge. But if the same man had neglected geology, and pursued other studies at a university, his B.A. degree would not improbably have been the end, instead of the starting-point, of the chief intellectual work and interests of his life. As geology is related to mining, so is economics to general business.

But in addition to a strong and alert mental faculty, the business man needs to have acquired a knowledge of human nature, together with the power of managing men, and to this end the social training afforded by life in a residentiary university of the Anglo-Saxon type is specially serviceable. For such a life draws out the faculties which are needed in the social relations of those who have to deal with large bodies of men and large public interests. On the river and in the football field the student learns to bear and forbear, to obey and to command. Constant discussion sharpens his wits; it makes him ready and resourceful; it helps him to enter into the points of view of others, and to explain his own; and it trains his sense of proportion as regards things and movements and persons, and especially as regards himself.

In short, the curriculum claims to give a liberal education; *i.e.* one which in the late Sir Richard Jebb's words "trains the intelligence, gives elasticity to the faculties of the mind, humanises the character; and forms, not merely an expert, but an efficient man"; while none the less it is a practical education for large affairs.

With these aims in view, the study of economics is supplemented by a compulsory study of the recent economic and general history of the chief countries of the western world; by a study partly compulsory and partly optional of the elements of political science; and by an optional study of Civil Law as applied to economic questions, and of International Law.

The distinctive feature of this scheme is the prominence given to recent international history. If the study of history is to be international, time cannot be found during the short three years of undergraduate life for carrying it further back than the beginning of the 19th century; though some general knowledge of the antecedents of that century is included. Of course there are some students of economics for whom the earlier centuries of English history have a special attraction; and provision is made for this important class of students by their liberty to substitute one part of the Historical Tripos, in which prominence is given to this subject, for one of the parts of the Economics Tripos. For each of these Triposes is divided into two parts, the first of which is taken, under ordinary conditions, at the end of the second year.

The chief reason for giving this prominence to international studies is the belief that the exceptional insularity of the thought and studies of Englishmen is prejudicial to the best interests of the nation both intellectual and material. Especially is the notion that England may be contented to study economics simply from her own point of view passing away. It is admitted that some generations ago, when she

was favoured by exceptional advantages, and was far in advance of other countries, she could afford almost to neglect their experience without much loss. But it is seen that the habit of depending solely on her own resources, which she thus acquired, continued after it had lost all justification; and, that as meanwhile all other progressive countries were giving much of their energies to learning from her and to learning from one another, she has been grievously handicapped in the race. Suddenly she has awakened to the fact that others, with certainly not greater natural vigour, have so profited by world experience as to advance faster than she has done in many directions, and to reach beyond her in a few. The studies encouraged by the Economics Tripos will help to free England from this great reproach.

The following is the schedule of the examination; the subjects marked with an asterisk are compulsory. In Part II. the student must take not less than two and not more than five papers besides those which are compulsory:—

Part I.

1. Subjects for an Essay. One paper.*
2. The existing British Constitution. One paper.*
3. Recent Economic and General History. Two papers.*
4. General Principles of Economics. Three papers.*

Part II.

1. Subjects for an Essay. One paper.*
2. General Economics. Three papers.*
3. Advanced Economics, mainly realistic. Two papers.
4. Advanced Economics, mainly analytic. Two papers.
5. Modern Political Theories. One paper.
6. International Law with reference to existing political conditions. One paper.
7. International Law with reference to existing economic conditions. One paper.
8. Principles of Law as applied to economic questions. Two papers.
9. Special subject or subjects. One paper each.

Some of the papers in each part include quotations from French and German writers. The Examiners have regard to the style and method of the answers.

The following are some details relating to Part I.:—

The paper on the existing British Constitution deals with the main outlines of the existing political and administrative organisation (central and local) of the United Kingdom, and with the government of colonies and dependencies, comparatively treated.

The questions on Recent Economic History deal chiefly with the United Kingdom and with the 19th century. They also take special account of other English-speaking peoples, and of France and Germany, during that period. Some knowledge of physical geography in relation to recent economic development is required.

The questions on Recent General History deal with the British Empire, Continental Europe, and the United States, and chiefly with the 19th century. They do not include military or literary history. Some knowledge of political geography is required.

The following are some details relating to Part II.:—

In Part II. an attempt is made to introduce into the Tripos system some of that elasticity and freedom of choice for each individual student which in some other Universities is obtained by a *viva voce* examination directed specially to branches of study which the candidate has selected for himself; his choice being, of course, subject to the condition that they shall be sufficiently broad, and yet have a certain unity.

The main purpose of the three compulsory papers on General Economics is to secure that those who take Part II. of this Tripos after another Tripos (or a part of it), should have a sound knowledge of the main principles of Economics at large; and that those who have already taken Part I. of this Tripos should not specialise even their later studies too narrowly. In addition, these papers are to lay stress on Public Finance, the Economic Functions of Government, and the ethical aspects of Economics generally; some discussion of socialism being included under this head; since all these matters are more appropriate to the later than to the earlier years of a student's career. But that work in Economics which is most distinctive of Part II. must necessarily be directed into rather narrower channels; for no one can do really advanced work over the whole field. And here a double bifurcation is required.

The first bifurcation has reference to the divergent needs of active life and of professional study. Those who are preparing for public or private business must in their third year give their chief attention to realistic work, to the facts of business life, and to the direct application of economic principles to them. Accordingly two papers, arranged specially for this class of students, are mainly realistic. Two similar papers are of a more exclusively academic character, and make provision (*a*) for some of the more obscure problems of value, such as those connected with the shifting and ultimate incidence of the burden of taxes; (*b*) for the history of Economic doctrines; and (*c*) for mathematical problems in Economics and Statistics. These papers are optional, but there is nothing to prevent any student from taking all of them.

The second bifurcation has reference to the different groups of subjects which are included under the broad title "Economics." They are all intimately connected with one another. There is scarcely any of these which can be studied at all thoroughly without some considerable knowledge of almost every other. But yet each professional student according to his bent of mind, and each man of affairs according to his work in life, will wish to give his chief attention to certain branches; and accordingly while each of the four papers on Advanced Economics contains some general questions, the majority of the questions in each paper is divided in about equal proportions among the four groups:—A, *Structure and Problems of Modern Industry*; B, *Wages and Conditions of Employment*; C, *Money, Credit, and Prices*; D, *International Trade and its Policy*.

A and B will be of special interest to those who expect to be employers of labour, or landowners, or to be engaged in the service of railways, or in the administration of government, central or local. C and D, together with the latter part of A, will meet the needs of those who are to be engaged in large financial transactions, as bankers, members of the stock exchange, etc.; while merchants and those members of manufacturing firms who are chiefly responsible for the external relations of the business rather than its internal organisation, will perhaps give their chief attention to D and part of either C or A. Those who expect to be engaged in the service of the poor will give the first place to B. The studies of any one who hopes to take part in legislation need to be broad; but he may reasonably specialise to some extent on one, or even two of the four.

The remaining subjects in Part II. lie outside the range of Economics, but are closely connected with it. They are all optional. Modern Political Theories will attract these who are likely to hold responsible political positions at home and abroad. The combination of economics, recent history, and political science with international law affords an introduction to the diplomatic and consular services. And lastly the fusion of economic and legal studies, which has given good results in Germany, the United States, and other countries, may perhaps be promoted by the optional papers on the Principles of Law.

Instruction in some of the subjects is given for the present not in lecture, but by personal guidance and advice as to reading. A. M.

ECONOMICS, TEACHING AT OXFORD.—The subject presents the following questions: To what ends is the teaching of Economics at Oxford directed? by whom is it given? to whom, and in what manner?

1. Success at examinations is for the most part the object directly aimed at. Doubtless there is an admixture of higher motives, and learning is not courted only for the sake of her dower. The examinations for which preparation is made are either instituted by the University or are external. The examinations at Oxford into which Economics enter pertain to the Final Honour school of Literæ Humaniores, the Honour school of Modern History, the Final Pass school, and the diploma in Economics. Candidates for Honours in Literæ Humaniores are examined, *inter alia*, in "the outlines of Political Economy." Out of some twelve papers one or two questions on one paper may bear directly on Economics. Those who have been taught to admire the Greek ideal of demonstrative knowledge are not encouraged to study the one department of Social Science in which deductive reasoning is practised with success. This deficiency is partly compensated by the permission which is given to candidates to offer "Political Economy with special study of two or more treatises" as an additional "special" subject. According to the statutes "in the arrangement of Honours great weight will be attached to excellence in a special subject." In spite of this assurance very few candidates for Honours in this school offer Political Economy as a special subject.

In the Honour school of Modern History a paper is set on "Political Economy with Economic History." But "candidates who do not aim at a place in the first or second class" may omit either this subject or Political Science. Additional weight accrues to Political Economy in this school when it is taken up as a "special subject." The curriculum for Political Economy as a special subject prescribes the study of two main topics—for the present year (1907), for instance, International Trade and Public Finance—partly in general treatises, partly by means of historical documents. For instance, under the head of Public Finance there are prescribed Bastable's treatise on the subject and a part of Wagner's *Finanzwissenschaft*, together with several parliamentary reports and speeches which throw light on the history of English finance from the beginning of the Great War to the end of the 19th century. This curriculum may appear somewhat discontinuous; but it would be difficult otherwise to comply with the condition imposed on a "special subject," that it should be "studied with reference to original authorities."

The "Elements of Political Economy," taken along with certain other subjects, forms one of the avenues by which the student who does not aspire to Honours may *pass* to the degree of B.A. Candidates are examined in Walker's *Political Economy*, and selected portions—nearly twenty chapters—of Adam Smith's *Wealth of Nations*. They are also "expected to show an acquaintance with the chief facts of the economic condition of England at the present time."

For the diploma in Economics there is an examination at which five papers are set to each candidate,—two in Economic Theory, one in Economic History, and two in special subjects which the candidate selects out of three groups of special subjects, viz.: A. Either (1) some special branch of economic theory, or (2) some particular school of economic thought, or (3) the treatise of some leading economist, *e.g.* (*a*) the theory of rent, or (*b*) the Austrian economists, or (*c*) Ricardo's *Principles* (fifteen possibilities are enumerated). B. On some special period of economic history (*e.g.* the Industrial Revolution). C. Some special branch of applied economics (*e.g.* the statistical measurement of changes in prices). The number of pairs that can be made out of the alternatives specified in the published list amounts to 231; and candidates are not restricted to selection from the list. They have also the option of offering a dissertation in lieu of a special subject.

The principal external examination to which the efforts of economic students at Oxford are directed is that which constitutes the open competition for the Civil Service of India, clerkships (Class I.) in the Home Civil Service, and Eastern cadetships. Candidates are expected to possess a knowledge of economic theory as treated in the larger text-books, also a knowledge of the existing economic conditions and of statistical methods as applied to economic inquiries, together with a general knowledge of the history of industry, land tenure, and economic legislation in the United Kingdom.

Success in an examination is not the only tangible result at which students may aim. There is the Cobden prize for the best essay on a subject set every four years; there are the degrees of Bachelor of Literature and Bachelor of Science, which may be won by economic as well as other kinds of research.

2. The subdivision of the second head follows that of the first; so far as the *raison d'être* of the teachers is the preparation for examinations. Of the numerous courses organised by the Faculty of Literæ Humaniores one may occasionally relate to an economic subject. For instance, there was announced for the Hilary Term 1907 "Informal Instruction in the Relation of Economics and Ethics (Problem of Collective Bargaining)." The Faculty of Modern History gives more prominence to Political Economy. One or more of the ablest historical tutors usually deliver a course of lectures on Political Economy. A larger number of teachers, six or seven at a time, are told off to assist candidates for the Final Pass school. In all these cases the teacher is usually a tutor in, or otherwise intimately connected with a particular college; but the benefit of his teaching is extended to members of other colleges by a kind of intercollegiate exchange which is not without economic interest. The diploma in Economics also calls forth teachers, some addressing themselves to the general part of the examination, some to the special subjects.

This classification of teachers does not comprehend the professor of Political Economy who is not tied down to any particular course. But he must not reckon upon an audience if he ignores the motive by which students are mainly attracted to lectures. The present professor usually lectures on one or two of the subjects prescribed for some of the examinations which have been mentioned, as well as in other subjects adapted to the needs both of those who are preparing for examinations and those who aim at higher objects. That there should be only one professorial teacher of so important a subject as Political Economy in so large a university as Oxford is an anomaly which has at length been mitigated by the creation of a lectureship in Economic History, the first holder being Mr. L. L. Price of Oriel College. The subject is also taught by many private teachers.

3. The persons taught at Oxford are mostly undergraduates, destined in due time to take the degree of B.A. by way of a Pass or an Honour examination. But to this general statement there are important exceptions. The Rhodes scholars are undergraduates *sui generis*; some of whom can only spend a year or two at Oxford, and so cannot take a regular degree—but at most a diploma. The diploma in Economics is open to students who are not members of the university, provided that they have pursued an approved course of study at Oxford. Also, men who have qualified themselves for the degree of B.A. by taking Honours in Literæ Humaniores may afterwards read for Honours in Modern History. Men who have taken Honours in either of these schools may afterwards read for the diploma in Economics. Women may undergo all the Oxford examinations which have been mentioned. In the case of the diploma they receive the same recognition as the men. In the case of the Honours Schools they are arranged in classes like the men. But they are not yet admitted to the "B.A." degree, the "B.Lit.," nor the "B.Sc." Among exceptional classes of students should be mentioned visitors from other academic worlds who occasionally attend the lectures of the professor. Mention may also be made of the students at Ruskin college, at present numbering fifty or sixty. They are usually members of the working class, often selected as men of mark by trade unions.

4. The commonest method of teaching is the lecture. Lectures are not usually interrupted by questions and answers. The advantages of dialectic, considerable in the case of economics, may be obtained by the "informal instruction" which often supplements lecturing. The teacher usually has read to him by the pupil—some-

times himself reads—an essay written on a subject of the kind set in the schools. The teacher then comments on the paper, correcting the form and adding to the matter. Sometimes two men with two papers will attend simultaneously, or a larger number may assemble for the discussion of a paper read by one of them, after the manner of a seminar (see COMMERCE, FACULTY OF, UNIVERSITY OF BIRMINGHAM). Doubtless it is a great advantage to a student to obtain for an hour, or even a shorter period, the full attention of a first-rate teacher. On the other hand numbers have a certain stimulating effect. Moreover, the distribution of knowledge on a large scale economises the labour of the teacher. The Modern History tutors discharge many of the functions which in foreign universities devolve upon professors. To impose exhausting work on these tutors is to diminish the efficiency of economic teaching at Oxford. F. Y. E.

ECONOMIC TEACHING IN THE UNITED STATES. The teaching of economics as a university discipline is essentially a modern development. The first professorship of the subject was at Columbia College, New York, where John M'Vickar was made professor of Moral Philosophy and Political Economy in 1819. The second professorship was at South Carolina College, Columbia, South Carolina, where Thomas Cooper, Professor of Chemistry, had the subject of Political Economy added to the title of the chair in 1826. The first professorship of Political Economy was established at Harvard College in 1871, and at Yale College in 1872, although the subject had been taught at Harvard by Francis Bowen since 1853.

Comparatively little attention was paid to economic questions apart from the problems of currency and free trade until after the civil war (1861-65). The new economic problems which forced themselves upon the attention of the country after the crisis of 1873 led to the migration of a number of young men to Germany to study economics With their return in the years 1878-85, rapid additions were made to the body of instructors in the larger institutions, and a number of new chairs were created. Since then the interest in economics has spread throughout the length and breadth of the land, until at the present time most of the several hundred colleges in the United States afford instruction in the subject, while the larger institutions have a staff of instructors devoted to it. At institutions like Columbia, Harvard, Yale, Chicago, and Wisconsin, there are from six to eight professors of Economics and Social Science, together with a corps of lecturers, instructors, and tutors.

The character of the instruction in economics in the United States varies largely with the institution. In the smaller colleges the courses are confined to one or two years of text-book work, and the instructor must devote so much time to teaching separate sections and to administrative work that there is comparatively little leisure for original research or productive work. In the larger institutions ample opportunities are afforded not only for a specialisation of courses on the part of the students, but also for scientific output on the part of the professors. In this respect, however, the American institutions are still in process of transition. There is being built up on the basis of the undergraduate or college department, which gives the degree of A.B., the post-graduate work, which in some places is called the strictly university work, leading to the higher degree of A.M. and especially to that of Ph.D. In such places an increasing share of the attention of the professors is thus being devoted to the post-graduate or strictly university work. In only one institution, *i.e.* Columbia University, is the line drawn at all strictly. Here one-half of the entire force, four out of the eight professors, have seats only in the University Faculty of Political Science, and not in the college or undergraduate department; and their work is almost exclusively confined to strictly post-graduate work. In most of the other great institutions the college still plays so large a part in the whole that a far more considerable share of the instruction is devoted to the undergraduates.

Owing to the great expansion of facilities separate courses are now delivered in most of the leading universities on various detailed questions of economics. These may be classified as follows:—

1. Economic History and History of Economics.—Such are courses, on the one hand, on the financial history of the United States, the industrial history of the United States, the tariff history of the United States, and the economic history of Europe in general and of the various European countries in particular; and, on the other hand, courses on the general history of economics, with special courses on the English economists and the foreign economists.

2. The General Theory of Economics.—Here we find preliminary and advanced courses on general principles, and especially courses on the theories of distribution. Here also belong the various courses on mathematical economics, on the theory of statistics, and on statistical practice.

3. Practical Economic Questions.—Such are courses on agriculture, on money, on labour, on transportation, on trusts and industrial organisation, on domestic and foreign trade, on banking, on insurance, on crises, and the like.

4. The subjects of Finance and Accounting.—Here we find courses on taxation, on public debts, on budgetary methods, and on the principles of accounting, private and public.

5. Courses on Sociology and Social Economy. —Among these are courses on the general principles of sociology, problems of social legislation, of pauperism, of criminology, and the like.

The result is that in the largest institutions sometimes as many as thirty or forty separate courses are offered.

The instruction for undergraduates is still largely given by means of text-book instruction. For the university work the instruction is almost exclusively by lectures supplemented by the system of "seminars" or special classes of advanced students meeting for research work under the direction of the professor.

The number of students in economics and social science has increased enormously in recent years. The American Economic Association publishes every year a list of the doctors' dissertations which are in progress. According to this list, the institutions having the largest number of advanced students working for a degree during the past few years are in the respective order: Columbia University, University of Wisconsin, Harvard University, Johns Hopkins University, and Cornell University. Several of the universities also now publish series of studies on economic questions. Among these are the Johns Hopkins University Studies, founded in 1883; Studies of the School of Political Science of Columbia University, founded in 1891; the University of Wisconsin Bulletin, founded in 1904; and the Harvard Economic Studies founded in 1906. Virtually all of the academic teachers of economics are members of the American Economic Association, which has over a thousand members, and which holds annual reunions in various parts of the country. Of recent years the study of economics has also been introduced into the high schools. But the study is limited to the barest elements of the science, and is generally included in what is known as Civics, or a discussion of the framework and fundamental principles of government.

Altogether the outlook for the academic study of economics in the United States has never been so bright as it is at the present time, and the interest is increasing from year to year. E. R. A. S.

ENGEL, Ernst (1821-1896), born at Dresden, began life as a civil engineer, but in 1850 undertook the direction of the newly founded Royal Saxon Bureau of Statistics. In 1858 he resigned this post, and after the death of Dieterici, in 1859, was appointed in 1860 Head of the Prussian Bureau of Statistics, holding the office for twenty-two years, during which period he carried on the work with such energy, that the Bureau, up to that date little known, became a most useful institution of great value to the government and the country in general in all social and economic matters. He also edited a statistical journal and founded a "Statistical Seminary" for students. He retired from the Bureau in 1882, owing partly to disagreement with the government and partly to failing health, but continued to work in retirement. Though brilliant and full of enthusiasm, he was not always a strictly accurate thinker. His principal work was to stimulate and develop the study of statistics.

Among his works are: *Das sächsische Obererzgebirge und seine gewerbliche Bedeutung in Gegenwart und Zukunft*, Dresden, 1855.—"Der Arbeitsvertrag und die Arbeitsgesellschaft" (in the *Arbeiterfreund*, 1867).—"Die Industrie der grossen Städte, eine sozial-statistische Betrachtung" (in the Berlin municipal calendar and year-book, 1868).—*Die industrielle Enquête und die Gewerbezählung im deutschen Reich und im preussischen Staate*, Berlin, 1878.—*Die Gewerbezählung vom i. xii. 1875 und ihre Resultate*, Berlin, 1878. *Deutschlands Getreideproduktion, Brotbedarf und Brotbeschaffung*, Berlin, 1881.—*Das Rechnungsbuch der Hausfrau und seine Bedeutung im Wirtschaftsleben der Nation*, Berlin, 1882. (Vol. xxiv. of the *Volksw. Zeitfragen.*)—*Der Wert des Menschen.* Part 1: *Der Kostenwert des Menschen*, Berlin, 1883. (Vols. xxxvii. and xxxviii. of the *Volksw. Zeitfragen*, forming the first part of a work planned by him in 3 vols. *Domos*, of which nothing further has been published.) In the *Assekuranz-Jahrbuch*, "Ein praktisches Beispiel der Altersfürsorge," 1886, and "Die Tilgung der Erziehungsschuld," 1887.

He published many articles in the *Zeitschrift des Statistischen Bureaus des Königlich-Sächsischen Ministeriums des Innern*: "Der Nutzen der Statistik," 1855;—"Ueber die Bedeutung der Bevölkerungsstatistik mit besonderer Beziehung auf die 1855er Volkszählung im Königreich Sachsen und die Produktions- und Konsumtionsstatistik," 1855.—"Beiträge zur Gewerbegeographie und Gewerbestatistik des Königreichs Sachsen," 1856-1857.—"Der Wohlthätigkeitskongress in Brüssel im September 1856," 1856.—"Der Viehstand auf dem grossen und kleinen Grundbesitz im Königreiche Sachsen, ein Beitrag zur Beantwortung der Frage: Ist die Grosskultur oder die Kleinkultur dem Staate nützlicher?" 1857.

In the *Zeitschrift des königlich-preussischen statistischen Bureaus* he published many articles: "L. A. J. Quetelet, eine Gedächtnisrede, gehalten in der Plenarversammlung des ix. intern. statistischen Kongresses zu Budapest am i. ix. 1876," 1876.—"Wer ist Konsument? Wer Produzent? Zwei international-statistische Fragen, versuchsweise beantwortet," 1879.—He further published in the *Zeitschr. f. d. ges. Staatsw.* 1853, "Die amtliche Statistik und das statistische Bureau im Königreich Sachsen mit einem Blick auf die statistische Centralkommission in Brüssel"—in the *Bulletin de l'Institut internat. de statist.*, vol. ii., Rome, 1887, "Rapport sur la consommation comme mesure de bien-être des individus des familles et des nations";—vol. ix. Rome, 1895-96, "Die Lebenskosten belgischer Arbeiterfamilien früher und jetzt. Ermittelt aus Familienhaushaltrechnungen und vergleichend

zusammengestellt." A number of important German old statistical writings were collected by Engel and published in the *Compte rendu* of the ix. International Statistical Congress (Budapest, 1876-78).

[See *Economic Journal*, vol. vii., London, 1896.—*Handwörterbuch der Staatswissenschaften*, giving a complete list of his works, vol. iii. 1900.]

ENGELS, FRIEDRICH (1820-1895), born at Barmen, Rhenish Prussia, died in England, where he had lived for many years. The son of a wealthy cotton manufacturer, he was connected with the business for a considerable part of his life. In his economic activity he was closely associated with Karl MARX, and his most important work was his assistance in the publication of the second and third parts of *Das Kapital* by that author, of which only the first part had appeared during the life of Marx. The readers of that book will recognise how greatly it is indebted to Engels for being issued in an intelligible form. The *Communistic Manifesto* of 1848 was written by the two friends. Several of the works of Engels are published in English.

"Umrisse zu einer Kritik der Nationalökonomie," in the *Deutsch-französischen Jahrbüchern*, 1844, and again in the *Neue Zeit*, vol. ix., 1890-91.—*Die Lage der Arbeitenden Klasse in England*, Leipzig, 1st ed. 1845, reprint, Stuttgart, 1892. Translated into English, *The Condition of the Working Classes in England in 1844*, New York, 1887, with a preface and appendix, the latter published separately as *The Working Class Movement in America*, New York, 1887; London, 1888; in German as *Die Arbeiterbewegung in Amerika*. — "Einleitung über Freihandel," a speech delivered in Brussels, 1849, translated into English, "K. Marx, Free Trade," Boston and London, 1889.—*Die preussische Militärfrage und die deutsche Arbeiterpartei*, Hamburg, 1865.—*Der deutsche Bauernkrieg*, 1875.—*Zur Wohnungsfrage*, 3 vols., Leipzig, 1872; Zurich, 1887.—*Soziales aus Russland*, Leipzig, 1875.—*Die Entwickelung des Sozialismus von der Utopie zur Wissenschaft*, Berlin, 1891.—*Der Ursprung der Familie des Privateigentums und des Staats*, 1894.—From the *Neue Zeit*: "Ueber den Bürgerkrieg in Frankreich," vol. ix., 1890-91.—"In Sachen Brentano contra Marx wegen angeblicher Citatsfälschung," vol. ix., 1890-91.—"Marx und Rodbertus," vol. iii., 1885.—"Der Sozialismus in Deutschland," vol. x., 1891-92.—"Ueber historischen Materialismus," vol. xi., 1892-93.—"Die Bauernfrage in Frankreich und Deutschland," vol. xiii., 1894-95.—Besides his work with Marx mentioned above (Marx, *Capital*, revised and edited by F. Engels, translated into English by Moore and Aveling, London, 1887), he also assisted him in the following works, writing prefaces, introductions, etc.,—introduction to *Vor den Kölner Geschworenen 1849*, 1885;—introduction (on the history of the "Bundes der Kommunisten") to *Enthüllungen über den Kölner Kommunistenprozess 1851*, 1885;—introduction to *Lohnarbeit und Kapital*, 1891;—note on Brentano in *Kapital*, vol. i., 1890;—and note on Rodbertus in vol. ii., 1885;—note on Rodbertus in *Das Elend der Philosophie*, 1885;—also introd., with biography of the author and history of the Prussian peasantry, to Wolff's *Die Schlesische Milliarde*, 1886;—introduction, with biography of author, to Borkheim's *Zur Erinnerung an die deutschen Mordspatrioten*, 1888.

[See *Handwörterbuch der Staatswissenschaften*, with complete list of his works, vol. iii., Jena, 1900.]

ENGINEERING TRADES INDUSTRIAL TREATY. During the early part of 1907 an important industrial treaty was drawn up and signed by the chairmen and secretaries of the executive bodies of the "Engineering Employers' Federation and the Engineering Trade Unions[1] as to working conditions and avoidance of disputes."

This treaty was practically the outcome of the "Terms of Settlement" between masters and men arranged at the close of the great strike in the engineering and ship-building trades of 1897-98. One of the most remarkable results of that strike was that confederation on both sides followed. While the engineering employers united in a carefully arranged organisation, the various trade unions concerned joined together in an alliance. These two great federations have done much since to keep the peace between masters and men. But it has gradually been felt that between two such powerful organisations an agreement should exist of a different nature from that of the "Terms of Settlement" made when the men were the vanquished and the employers the dictating parties. The revision of the treaty, which has been discussed from time to time during the last ten years, has now been carried out. To quote from the article on the subject in the Financial and Commercial Supplement to the *Times* of Monday, April 29, 1907: It is doubtful if, in all our industrial affairs, a more comprehensive and fair-minded document was ever evolved. Its principle is justice, and its essence is what, in trade-union phraseology, is called "mutuality." It is the product of mutual respect engendered in the long term of peace since one of the most severe industrial wars on record. Here, for instance, is the note as sounded in the preamble:—

"The representatives of the Engineering Employers' Federation on the one hand and of the Engineering Trade Unions on the other hand, being met in joint conference, and being convinced that the interests of each will be best served and the rights of each best maintained by a mutual agreement, hereby decide to adopt measures to avoid friction and stoppage of work."

This statement implies a "permanent abolition of the militant element."

[1] The engineering trade unions are the Amalgamated Society of Engineers, the Steam Engine Makers' Society, and the United Machine Workers' Association.

The present agreement carries out this feeling. "It provides for the effective recognition of trade unions and also of non-union labour."

We quote from the most important clauses which define the general principles.

(1) The federated employers shall not interfere with the proper functions of the trade unions, and the trade unions shall not interfere with the employers in the management of their business.

(2) Every employer may belong to the Federation, and every workman may belong to a trade union or not, as either of them may think fit. Every employer may employ any man, and every workman may take employment with any employer, whether the workman or the employer belong or not to a trade union or to the Federation respectively. The trade unions recommend all their members not to object to work with non-union workmen, and the Federation recommend all their members not to object to employ union workmen on the ground that they are members of a trade union. No workman shall be required to make a declaration as to whether he belongs to a trade union or not.

(5) Employers have the right to employ workmen at rates of wages mutually satisfactory to the employer and the workman or workmen concerned. In fixing the rates of skilled workmen, the employer shall have regard to the rates prevailing in the district for fully trained and skilled men. Unions, while disclaiming any right to interfere with the wages of workmen other than their own members, have the right in their collective capacity to arrange the rate of wages at which their members may accept work. General alterations in the rates of wages in any district shall be negotiated between the employers' local association and the local representatives of the trade union or unions concerned.

(6) There shall be no recognised proportion of apprentices to journeymen, but it shall be open to the unionists to bring forward for discussion the proportion of apprentices generally employed in the whole federated area. An apprentice shall be afforded facilities for acquiring a practical knowledge of the branch of trade he adopts, and shall be encouraged to obtain a theoretical knowledge thereof as far as circumstances permit.

(7) Selection, training, and employment of operatives and manning of machine tools:—

Employers have the right to select, train, and employ those whom they consider best adapted to the various operations carried on in their workshops, and to pay them according to their ability as workmen. Employers, in view of the necessity of obtaining the most economical production, whether by skilled or unskilled workmen, have full discretion to appoint the men they consider suitable to work all their machine tools, and to determine the conditions under which they shall be worked. The Federation recommend their members that, when they are carrying out changes in their workshops which will result in displacement of labour, consideration should be given to the case of the workmen who may be displaced, with a view, if possible, of retaining their services on the work affected or finding other employment for them.

(8) With a view to avoid disputes, deputations of workmen shall be received by their employers, by appointment, for mutual discussion of any question in the settlement of which both parties are directly concerned; or it shall be competent for an official of the trade union to approach the local secretary of the Employers' Association with regard to any such question; or it shall be competent for either party to bring the question before a local conference to be held between the local association of employers and the local representatives of the trade unions. In the event of either party desiring to raise any question, a local conference for this purpose may be arranged by application to the Secretary of the Employers' Association or of the trade union concerned, as the case may be. . . . There shall be no stoppage of work either of a partial or of a general character, but work shall proceed under the current conditions until the procedure provided for above has been carried through.

In the constitution of conferences common sense appears to have prevailed. Satisfactory rules have been made as to the selection of delegates.

It was decided that, "An employer who refuses to employ trade unionists will not be eligible to sit in conferences."

With regard to overtime and piece-work, the employers agree to discourage overtime (which no rational employer favours), and no union workman shall give more than thirty-two hours' overtime in any four weeks except in emergencies. The employers also concede that no man on piece-work shall earn less than he would if he were being rated according to time.

The statement here given explains the main provisions of a treaty which reflects credit on the reason and good sense of those who have drafted it, and which may well stand as a pattern to the whole industrial world. It assures the "proper" authority of the trade unions who can now afford to recognise what they have sometimes attempted to ignore or destroy—freedom of employment and freedom of labour—in other words, the liberty of the subject, while trade union rights to collective bargaining are established, the right of employers to elect and rate workmen according to their ability or industry, and not merely according to dead-level scale, is also established. With regard to machine tools the employers have accorded the workmen the freedom which they claimed, but they in turn agree to give special consideration to the case of workmen displaced by the adoption of machine tools. The terms and the temper of the agreement on both sides give good hope of industrial peace and industrial prosperity.

A similar movement is taking place in America, where much distress has been caused by violent and lawless agitators and by irresponsible trade unions of a low stamp.[1] Employers' organisations have been formed to meet

[1] See Engineering Supplement, *Times*, July 17, 1907.

[redacted]rt these evils all over the United States, the largest being that of Chicago, including 3000 to 4000 firms employing about 200,000 men and with a united capital of about £50,000,000. This association differs from those formed in England, which include businesses of one kind only, in being a federation of smaller associations of individual trades united under one organisation. It originated about the year 1902 when representatives of the great firms of Chicago met together to discuss how to deal with the unbearable tyranny of certain trade unions and labour organisations, and decided to enter into a mutual defensive alliance pledged to stand by any one of the firms concerned in the event of attack.

A central body, "The Citizens' Industrial Association of America," has since been formed of all associations having similar views, one of their principal objects being to educate the public, and especially working men, by means of literature, lectures, etc., so that they may understand the economic conditions under which they live, and be intellectually equipped to withstand the misleading influence of unscrupulous or ignorant agitators. Their work is, however, by no means confined to instruction. The associations maintain much the same principles as the Engineering Federation of Great Britain. The most important of these is the "Open Shop," by which is meant the power of masters to employ union or non-union men without discrimination. They also strive for the suppression of "sympathetic strikes," that is to say, the practice—far less common in England than in the United States—of declaring a strike in one trade because there happens to be one in another though quite unconnected. It is also desired to prevent restriction of output, and of the number of apprentices. Finally, some of the most important part of the work has been carried out by the Legal Department, which during the year November 1905 to November 1906 considered and handled "2007 cases, both civil and criminal. A large proportion of these cases were criminal ones, growing out of the recent teamsters' strike in Chicago. The total number of convictions arising out of that strike were 803, of which 725 were cases of violence against members of the association. No effort was made to obtain severe punishments, the general principle followed being that it is the certainty rather than the severity of the punishment that deters crime. Many prosecutions were instituted against union men, although the evidence was weak, simply for the moral effect of the prosecution. The attorney for the association claims that because of these prosecutions union men have far more respect for the law to-day than in previous years."

These views, like those of the similar associations of England, are by no means unreasonable. They are prepared to treat labour organisations with great fairness and openness as long as the latter are in their turn reasonable and law-abiding. As in England, their primary objects are industrial freedom, the avoidance of labour disputes and of the stoppage of trade, and they claim, no doubt with great justice, that they have already inculcated a better understanding of the points at issue and strongly influenced public feeling in the direction of peace.

Few persons are aware how much our industries and also the workmen employed in them have lost through the unwillingness in years gone by of men of ability to expend their energies and their fortunes in businesses in which they would be compelled to subject themselves to the tyranny of the trade unions.

[See ARBITRATION BETWEEN EMPLOYERS AND EMPLOYED; CONCILIATION, BOARDS OF; CONSEILS DE PRUD'HOMMES; EMPLOYERS AND EMPLOYED; INDUSTRY, CAPTAINS OF; LABOUR AND CAPITAL; STRIKES; TRADE UNIONS; and in the Appendix COPARTNERSHIP; TRADE UNIONS AND STRIKES; UNEMPLOYED.]

EXPORTS, INVISIBLE. The large excess of imports over exports in the trade of this country has long been a subject of remark. How can the difference between these two sets of figures be accounted for?

The figures of recent years are as follows:—

	Total Imports.	Total Exports.	Excess of Imports.
	£	£	£
1900	523,000,000	354,000,000	*169,000,000*
1901	522,000,000	348,000,000	*174,000,000*
1902	528,000,000	349,000,000	*179,000,000*
1903	543,000,000	360,000,000	*183,000,000*
1904	551,000,000	371,000,000	*180,000,000*
1905	565,000,000	408,000,000	*157,000,000*

The excess of the imports over the exports of the United Kingdom was larger for the year 1900 than it had been any year before. This excess increases in the main progressively. Thirty years ago the figures were but a quarter of what they are now. To understand the real meaning of the phenomenon, we have, in the first place, to remember that while the value of the imports is correctly stated, the value of the exports is necessarily understated, and that largely. The figures stating the cost of the exports are taken from the declarations made either by the owner of the goods or the agent who forwards them for shipping abroad. It can neither include the profit which the exporter expects to make, nor the whole of the cost of conveying the goods to their destination. Into these heads many items are brought which few people unconnected with business would ever think of. For instance, there is the whole expense of agency, no small charge in itself. The cost of freight

is very large. Ships are very perishable. They become rapidly out of date; they require constant repair. The payment for freight provides, among other things, practically the cost of the construction, maintenance, and navigation of those powerful lines of enormous steamers which connect this country with the rest of the world. Sir R. Giffen, who gave the amounts received in this manner the name of "Invisible Exports," about 1904 estimated these in the form of earnings of ships, commissions, and brokerage as not less than £100,000,000 a year.

Besides these amounts which do not appear in our ordinary statistics, there are the payments of the annual interest due on the [redacted] which was exported many years back and invested abroad. These are estimated as being some £60,000,000 a year. We need not pursue the subject further into detail, but we think that enough has been said to explain that the difference between the amounts of our exports and imports which occasionally puzzles the untrained reader of the official statistics of the trade of the country is largely a matter of account.

Sir R. Giffen, *Essays in Finance*, First Series 1880, Second Series 1886; Bell. — *Economic Inquiries and Studies*, two vols., 1904, Bell.

FERRARA, FRANCESCO (1810-1900), born in Palermo, died in Venice. Italians consider him their best Economist of the 19th century.

Ferrara's works have been nearly all collected in four large volumes, published by the *Unione Tipografica editrice* of Turin, 1889-91. This publication, however, never had his consent, although he could not legally oppose it. To Ferrara is due the renewal of economic study in Italy. He obtained this result by putting into the hands of Italian students translations of a collection of all the principal foreign writers on economics, and editing the *Biblioteca dell'Economista*, with historical and critical prefaces, constituting a complete treatise on economics. From Sicily, where he had been imprisoned in 1848, and soon after liberated by the successful revolution, he had been sent to Turin to offer the throne of Sicily to the second son of Charles Albert. He could not return to Sicily where the Bourbons had re-established their government. He joined the staff of the *Risorgimento*, which paper was edited by CAVOUR. On the 16th of November 1849, he gave his inaugural speech at the university of Turin, where he taught till 1859. This speech proclaimed him then and there as an economist superior to any other Italian economist ever since the times of GALIANI, GENOVESI, VERRI, GIOIA, etc., and superior to SCIALOJA, his predecessor in the chair of Turin, and to Pellegrino ROSSI, who had been teaching at the Institute in Paris and had just been murdered in Rome. In the ten years during which he occupied the chair of political economy in Turin his time was exclusively taken up by scientific work, and we owe to this period his writings on the theory of value, in which many of the most recent views are anticipated, on material and immaterial products, in which this problem, so difficult to many writers, seems definitively settled, on net and gross produce, on wages, on economic crises, on money, on free trade and protection, on banks, and banking, etc. Into this period fall also his historical and critical explanations of the doctrines of the MERCANTILE SCHOOL, the PHYSIOCRATS, A. SMITH, of Smith's successors, RICARDO, MALTHUS, SAY, etc. Ferrara's lectures were collected on two occasions by students of his, in 1856-57, and 1857-58, but in a very inadequate way. In 1859 he had to resign, accused of having offended against the laws of the State in his lectures. He was offered a chair at Bologna and at Pisa, and preferred going to Pisa. From here, however, he was soon called to Sicily, occupied by the Italians in 1860, and he there took charge of a branch of the financial administration. Soon afterwards he entered parliament. He prepared the bill for the grist-tax (see MACINATO), the bill for the general tax on all income not already taxed by the land tax and the tax on houses—*imposta di ricchezza mobile*—spoke and wrote on inconvertible paper money, on banks of issue, was minister of finance for a short time, and retired in 1875 from active politics to Venice, taking the directorship of the first Superior School of Commerce founded in Italy. There he returned to science and to teaching, remaining a deputy till 1880, when he was made a senator. The Superior School of Commerce in Venice, besides forming merchants, has sections whose purpose it is to train future consuls, teachers of political economy, and accountants. Through these sections a large number of scholars of Ferrara are disseminated in the several branches of public administration, or are managing directors in commercial concerns. Ferrara, as a teacher, had the same conspicuous quality that CAIRNES had—to make the most complex problems appear so clear and simple, by reducing them to a few fundamental forces, that his solutions of problems remained indelibly impressed in the minds of scholars, and his method of working became a mental habit with his pupils. In polemics he was most formidable through his masterly use of irony. He often had occasion to make use of this quality, and rarely avoided these occasions. As a strenuous free-trader and personal friend of CORDEN, the reviews and papers of the time are full of polemical articles. He also strongly opposed the teaching of the SOCIALISTS OF THE CHAIR, imported from Germany after the famous Congress of Eisenach in 1874. Some of the leading Italian economists, such as Lampertico, COSSA, Luzzatti, having shown sympathy with socialism of the chair, historicism, relativity of economic laws, etc. (see RELATIVITY, PRINCIPLE OF), and having founded in Milan an economic association, Ferrara created the Adam SMITH society in Florence, with Martello, Pareto, Peruzzi, MAGLIANI, and others, and wrote on that occasion, among

[redacted] Lampertico, a [redacted]e, apart from its [redacted]r. His writings are [redacted]here. A good biblio- [redacted]up by Professor Bertolini [redacted]*iornale degli Economisti* for [redacted]. 45-58. Ferrara was then [redacted] writer is not aware that anything [redacted]portant has been added to the list. M. P.

FIRMS, PUBLIC REGISTER. See PARTNERSHIP; LIMITED PARTNERSHIPS ACT 1907, and STYLE or TRADE NAME, in Appendix.

FOOD SUPPLY OF THE UNITED KINGDOM, THE. The pressure of population on the means of subsistence—a question which at one time seriously disturbed the minds of economists and statesmen—has in the United Kingdom long since reached a stage which, if these islands were dependent upon their own resources, would be most serious. The opening up of new countries accompanied by, or consequent upon, the development of rapid and cheap means of communication with all parts of the world has rendered the supply of food to nearly forty-five millions of people easier and more regular than it was a century ago to about fifteen millions. Food in this country was never more plentiful, and the risk of starvation from absolute scarcity was never less than it is in the early years of the 20th century. So far, indeed, from any difficulty arising in meeting the demands of the ever-increasing population for sustenance, their individual requirements have enormously extended. The consumption of food per head is probably actually larger in amount, and is much more varied. The national dietary now comprises many articles which were unknown to our grandfathers, or restricted as luxuries to very few.

The total amount of food produced in the United Kingdom is not known, nor is it easy to make any close estimate of its amount. The returns of produce annually collected by the Board of Agriculture are confined to the chief farm crops, which include Wheat and Potatoes, the two products of which the consumption is greatest. The returns of farm animals provide a basis for calculating the home supply of meat and dairy products, and estimates of these have been made by a Committee of the Royal Statistical Society. The following approximate estimate,[1] based as far as possible on the returns of the three years 1904-6, of the amount of produce sold off the farms of the United Kingdom annually for human consumption presents as complete a statement as is at present available.

	Cwts.
Wheat	23,000 000
Barley	20,000,000
Oats	2,000,000
Peas	100,000
Potatoes	90,000,000
Other Vegetables	27,500,000
Fruit	14,500,000
Meat	25,000,000
Milk	56,000,000
Cheese and Butter	4,500,000
Poultry and Eggs	3,500,000

These quantities, it is to be observed, represent not the total production of the land, but that proportion of it which is estimated as being used for human food. In the case of barley nearly the whole of the above quantity is made into beer, the amount used for human consumption otherwise being reckoned at not more than one-tenth. Game and rabbits are not included in this list, while a very considerable item in the national food supply—fish—is altogether excluded. Not reckoning the products of inland waters or shell fish, the quantity of fish landed annually on our coasts is about 20,000,000 cwts. It must also be remembered that a large quantity of food is produced in private gardens and consumed by the producers, which cannot be included in a general estimate of the output of the land, but which nevertheless forms in the aggregate a very substantial contribution to the sustenance of the nation.

The food supplies which come in ever-increasing volume to our ports may be shortly catalogued from the Trade Returns, the average of the three years 1904-6 being taken. The chief items are:—

	Cwts.
Wheat and Flour (as Wheat)	115,000,000
Rice, Sago, and other farinaceous substances	11,100,000
Potatoes	5,830,000
Raw Fruit (except Bananas) and Nuts	13,360,000
Meat (live and dead)	20,000,000
Butter	4,242,000
Margarine	1,050,000
Cheese	2,545,000
Milk (condensed)	902,000
Fresh Milk and Cream	11,000
Lard	1,964,000
Sugar	31,665,000

To this statement should be added 2,305,000 thousands of eggs, 8,000,000 bushels of onions, and 5,358,000 bunches of bananas, as well as an uncertain but comparatively small proportion of barley, oats, and peas which are directly consumed as food. A considerable quantity of imported barley is used for malting, but probably a great part is utilised as food for stock. No account is taken of the imports of tea, coffee, cocoa, wine, spirits, and other beverages which ought properly to be included in the food supply.

Without attempting too close a calculation—which the data do not justify—of the proportion of our total supplies of food which are produced at home and abroad respectively, it will suffice

[1] See "The Food Production of British Farms," *Journal Royal Agricultural Society*, vol. 64.

to note the relation in the case of a few principal items. Thus we obtain from extraneous sources about 83 per cent of our wheat, 45 per cent of our meat, and 60 per cent of our cheese and butter, while it would also appear (though this is a very uncertain figure) that nearly half the supplies of fruit which come into the market are of foreign or colonial origin. When to this is added the whole supply of sugar, as well as the supply of all beverages except beer, spirits, and mineral waters, the dependence of the national commissariat on over-sea contributions is sufficiently apparent.

Under normal conditions of trade this dependence, which is the result of purely economic causes, affords grounds for neither surprise nor anxiety. Indeed, the extent and variety of our sources of supply furnish a substantial guarantee against scarcity. But it is impossible to avoid the reflection that the reliance of four-fifths of the population for their daily bread on the uninterrupted maintenance of over-sea communications involves a risk, which, however small, is nevertheless appalling to contemplate. A strict investment of these islands, in the sense in which Paris was invested, is practically inconceivable. It could not begin to come within the bounds of possibility until our fleet was over-mastered and the supremacy of the sea was absolutely lost. And in that disastrous event it may be argued that, as the nation would lie at the mercy of invading armies, it would matter little if it were conquered by starvation or by assault. But without contemplating [redacted] serious risk, not [redacted] such a reduction in [redacted] as might materially [redacted] nation to wage successfi[redacted] considerations involved [redacted] are exhaustively discussed [redacted] and Evidence of the Royal Commissi[redacted] Supply of Food and Raw Material in Time of War, and space does not here permit of more than a reference to the voluminous information therein contained. Amid much difference of opinion, it is generally admitted that there is a probability, if not indeed a certainty, that in the event of war with one or more maritime powers, there would be a panic rise of price, even exceeding that estimated by D'AVENANT. (See vol. i. of this Dictionary, p. 484 *c*, and vol. iii. p. 498 *c*.) Nor, apart from war, is the possibility of a failure or serious shortage of the harvest, leaving all exporting countries with little more than sufficient for their own requirements, a contingency to be altogether ignored. While, therefore, our ever-increasing dependence for the means of subsistence as a nation on over-sea supplies need cause no alarm in times of peace and plenty, it cannot fail to induce misgivings as to a position in circumstances which, however unlikely, are by no means impossible. At any rate, it provides an additional incentive on national grounds for the adoption of all practicable means for maintaining the land of the country in cultivation and increasing its productiveness. R. H. R.

GEISSLER, DR. ADOLF (*c.* 1834-1902), was, like many other German economists, originally trained for another branch of study, having received a very thorough education in medicine. He also obtained a complete mastery of the mathematical theory of statistics. His earlier publications dealt with questions of weakness and diseases of the eyesight. In 1865 he produced a book dealing with injuries to the eyes in relation to the needs of practical physicians; and this was followed in 1882 by one on colour-blindness. Apparently his most important economic work was a monograph on the mortality and duration of life among Saxon doctors, published in 1887. He became director of the Royal Saxon Bureau of Statistics in succession to Böhmert, and published several other medico-economic monographs, on the proportion of males to females at birth, on the influence of mortality on the birth-rate, and on the mortality of invalids. He also published some anthropometrical studies. His chief works were:—

Die Verletzungen des Auges.—Monographsicht mit besonderer Rücksicht auf die Bedürfnisse des praktischen Aertzes, etc., 1865.—*Die Farbenblindheit ihre prüfungsmethoden und ihre praktische bedeutung*, 1882.—*Die Sterblickheit und Lebensdauer die sächsisschen Aertze*, 1887. [See *Economic Journal* for March 1902.] N. B. D.

GEORGE, HENRY (1839-1897), was the son of a Custom House clerk in Philadelphia, Pennsylvania. He left school when less than fourteen years of age, and after spending two years in a store went to sea as a foremast boy; when seventeen he returned and entered the printing trade. In 1858 he went to San Francisco, became first a miner, then a government inspector, and finally a journalist. He visited New York in 1868 to set up a telegraphic news bureau for a San Francisco newspaper. Failing in his endeavour he returned to the western city the following year. But his stay in New York had opened his eyes to the poverty which accompanied increasing aggregate wealth, and two years after his return he wrote a pamphlet entitled *Our Land and Land Policy*. This did not create much impression, but it contains his leading idea. He then set to work to prepare for a more thorough study of the problem and more detailed exposition, and in 1877 the writing of *Progress and Poverty*, which appeared in 1879,

[redacted]dition, [redacted]d many dis-[redacted]nslated into all [redacted]. "an inquiry into the [redacted]pressions and of increase [redacted]se of wealth." The increase [redacted]uctive power has "neither lessened the toil of those who most need respite, nor brought plenty to the poor." Poverty is deepest and the struggle for existence sharpest where "the conditions to which material progress everywhere tends are most fully realised." This fact proves that the social difficulties existing "do not arise from local circumstances, but are, in some way or another, engendered by progress itself." The reason for the growth of poverty "is that, with increase in productive power, rent tends to even greater increase, thus producing a constant tendency to the bringing down of wages." Rent and wages depend on the margin of cultivation, rent "rising as it falls, and falling as it rises"; wages "falling as it falls, and rising as it rises." The true remedy, then, is to make land common property. It is not necessary, however, to confiscate the land, "it is only necessary to confiscate rent." "What I propose as the simple yet sovereign remedy . . . is to appropriate rent by taxation," "to abolish all taxation save that upon land values." The entire rent, earned and unearned, should be confiscated. When improvements become indistinguishable from the land itself "the title to improvements becomes blended with the title to the land; the individual right is lost in the common right." All that justice or policy requires is the separation of "the value of the clearly distinguishable improvements made within a moderate period, from the value of the land, should they be destroyed." The danger of these opinions has become more apparent as time goes on.

In 1882 George wrote a pamphlet on *The Irish Land Question*, took the side of the Land Leaguers, and spoke for them. The remainder of his life was spent in propagating his philosophy by means of books, newspapers, agitation, and organisation. He made New York his headquarters, but made lecturing tours in America, England, and Australia. He was a candidate for mayor of New York in 1886 and 1897, but during the election campaign in the latter year he died suddenly of apoplexy. A biography has been written by his son. George's chief writings are—

Our Land and Land Policy, 1871.—*Progress and Poverty*, 1879.—*The (Irish) Land Question*, 1881.—*Social Problems*, 1883.—*Protection and Free Trade*, 1885.—*The Condition of Labour*, 1891.—*A Perplexed Philosopher*, 1892.—*The Science of Political Economy* (posthumous publication). An adverse criticism of the theory contained in *Progress and Poverty* appears in *Contemporary Socialism*, by Rae. J. H. J.

GIBBINS, The Rev. Henry de Beltgens (1865-1897), born at Port Elizabeth, Cape Colony, was educated at Bradford Grammar School and at Wadham College, Oxford, obtaining the Cobden University prize in 1890. After holding various posts connected with education in England, he was appointed Principal of Lennoxville University, Canada, in 1906, but resigned soon after owing to ill-health and returned to England. He retained an interest in economics during his life, and his works, which were largely historical, were widely read and popular. His *Industrial History of England* went into ten editions in fifteen years; his *Industry in England* and *The English People in the Nineteenth Century* are both in their third edition; and he also wrote *The History of Commerce in Europe*, 1891, *English Social Reformers*, 1892, *British Commerce and Colonies*, 1893, *Industrial and Commercial Progress of the Nineteenth Century*, *Economics of Commerce*, 1905, and a history of Kidderminster School, of which he was for a time headmaster. He also edited the *Social Questions of To-day* series, and frequently wrote in the reviews.

He contributed to this *Dictionary* the articles on Goldsmiths, Goldsmiths' Notes; Government Regulation of Industry, discussing the earlier history of Taxation; Pre-Roman Industry in Britain, and the Biographies of Richard Oastler and Max Stirner.

Mr. Gibbins' early death by an accident cut short a career which, if prolonged, might have produced further useful results.

GOLD, INCREASE IN THE PRODUCTION OF. It is a matter of common knowledge that the production of the precious metals, and especially of gold, during recent years has increased to an amount unknown before. We wish in our present remarks to discuss not only this fact, but also some of the results to business, and particularly to banking, which will naturally follow. These are sometimes lost sight of. The increase in amount has been more than was anticipated, while the influence of the increased supply has been in some respects different from what has been expected. Some people have thought that changes in price would result which would correspond in some degree with what occurred some fifty or sixty years since, when the gold discoveries of California and Australia surprised the world. But history has on this occasion not repeated itself, and very remarkable differences have been noticed between what has occurred now and what took place then. Cairnes's *Essays on the Gold Question* are the best chronicle of what occurred after the gold discoveries in Australia. A general rise of prices took place. Butchers' meat and most other animal and agricultural products rose greatly in price. On the other hand, since the recent gold discoveries, producing a yield largely in excess of those of

half a century since, which alarmed the French economist, M. CHEVALIER, so greatly, and had an influence on the judgment of RICHARD COBDEN, no similar effect on prices has at present followed. Sauerbeck's Index Number shows that at the present time the prices of articles of food are distinctly lower than they were thirty years since, and prices generally stand very nearly at the level at which they were marked then. The annual production of gold recorded is more than twice as large now as it was at that period, as the tables which will be found farther on in this paper show conclusively, and the coinages of gold have even been larger in proportion. It must not be forgotten that banking also has developed itself very largely during the period now under discussion, and one result of banking is to economise the use of the precious metals, thus assisting the development of credit, which has always so great an effect on prices.

The question naturally arises, What has been the reason of the different effect of similar events at different periods? A good deal of information on this point can be obtained from the interesting summary of monetary events published annually in the *Reports of the Director of the United States Mint* and from the tables which the reports contain. The fact is simply this: the use of gold as a standard and as currency has increased more rapidly than the amount produced. We must carry our retrospect some distance back. Within the last thirty years all the great countries of the world have adopted either gold as a standard, or the use of gold in a manner which practically has the same influence in promoting the use of gold as a medium of exchange. Germany was the first great country of Europe to make the change. The fundamental coinage laws were those of Dec. 4, 1871, and July 9, 1873. Before that time the currency of Germany was mainly silver, the coinage being of great complexity.

Meanwhile all the countries forming the Latin Union, which includes France, Belgium, Italy, Switzerland, and Greece, and has probably the largest gold coinage—in the 20 and 10 franc piece—in the world, are legally bimetallic; but as the private coinage of silver was suspended (in France and Belgium in 1873), and is solely in the hands of the Governments concerned, the only important coinage is of gold. These countries may therefore be regarded as gold coinage countries. The change from the use of silver to gold has taken a considerable time to bring about in the LATIN UNION, the last monetary convention among the countries of the Union having been that of 1885. The condition of matters in these countries is somewhat like that of England in the early part of the 19th century. For many years the use of gold prevailed here, though legally the double standard was in force.

In t[illegible] the 14th M[illegible] gold standard to[illegible] with which a parit[illegible] other forms of mone[illegible] country. (*United State[illegible]* 149.)

Russia in 1897, India in 1899 (at the 15 rupees to £1 sterling, thus making the silver rupee worth 1s. 4d.), Austria-Hungary in 1892, the Scandinavian Monetary Union (Denmark, Sweden, and Norway) in 1873, have all adopted gold. Holland also is on a gold system, the coinage of silver having been suspended at the same date as in France and Belgium. Italy, which had long a large over-issue of paper, suspended the coinage of silver in 1875, and is now on the same level as France and Belgium.

The following countries adopted gold at the dates mentioned:—Costa Rica, 1896; Japan, 1897; Ecuador, 1900; Panama, 1903; Colombia, 1903; Mexico, 1905. Chile adopted gold in 1895, but a year or two afterwards she suspended the gold standard. Peru has ceased to coin silver since 1897, except recoinages into fractional money. Gold coin to the value of £369,841 was coined in Peru during the years 1903-5, but this small issue does not appear to have been repeated.

Having thus indicated in a general way the principal events which have influenced the use of gold as a standard, or as the coin in general use, we learn from this rough summary of history what has occurred, which is briefly this. The United Kingdom was, down to the year 1870, the only important country with a gold standard. At the present time all the important countries of the world use gold.

We will proceed to give all the particulars we can as to the production and use of gold.

Table I. gives the estimated production of gold from the year 1841 to 1905. 1844 is the date of our Bank Act in England, and is taken as indicating the commencement of the modern banking system.

This table enables us to see to what an extent the circumstances of the world in respect to the supply of gold have altered since that date. The table commences with the annual average of production for the years 1841-1850. The columns of proportional figures enable us to trace the course of events, taking the first ten years as equalling 100. From this point the table is divided into periods of five years. The result of the discoveries of gold in California, 1848, and Australia, 1851, are shown by the rise of the proportional figure from 100 to an average of more than 350; that is to say, fully three and a half times within five years. This proportion is continued in the main for the next forty years. About 1891 the production of gold began to receive a considerable impetus, principally from South Africa, and in

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ans that in twenty years from this time it may be expected that the stock of gold in the world will have received an increase of about twice as large as the whole production in the sixty years from 1841 to 1905 (*Report on the Production of the Precious Metals, United States Treasury*, 1905).

TABLE I.—*Production of Gold and Silver in the World since 1841, in Periods of Five Years.*

GOLD.

Years.	Annual Average for Period.	Proportion of each group to 1841-1850. 1841-1850 =100.	Total for Period.
1841–1850	£7,239,000	*100*	£72,786,000
1851–1855	26,503,000	*363*	132,513,000
1856–1860	26,817,000	*373*	134,083,000
1861–1865	24,598,000	*341*	122,989,000
1866–1870	25,923,000	*360*	129,614,000
1871–1875	23,115,000	*321*	115,577,000
1876–1880	22,917,000	*318*	114,586,000
1881–1885	19,823,000	*275*	99,116,000
1886–1890	22,579,000	*313*	112,895,000
1891–1895	32,589,000	*453*	162,947,000
1896–1900	51,460,000	*714*	257,301,000
1901–1905	64,412,000	*894*	322,060,000
			£1,776,467,000

SILVER.

Years.	Annual Average Coining Value for Period.	Proportion of each group to 1841-1850. 1841-1850 =100.	Total for Period.
1841–1850	£6,488,000	*100*	£64,880,000
1851–1855	7,365,000	*114*	36,834,000
1856–1860	7,524,000	*116*	37,618,000
1861–1865	9,154,000	*141*	45,772,000
1866–1870	11,133,000	*171*	55,665,000
1871–1875	16,373,000	*252*	81,864,000
1876–1880	20,370,000	*314*	101,851,000
1881–1885	23,791,000	*367*	118,955,000
1886–1890	28,168,000	*433*	140,815,000
1891–1895	40,748,000	*618*	203,742,000
1896–1900	42,846,000	*661*	214,229,000
1901–1905	42,674,000	*657*	213,370,000
			£1,315,595,000

Meanwhile the demonetisation of silver has continuously gone on; but it is very remarkable that the annual production of that metal has increased, though not to the same extent as the gold, during the same time. The annual average production, which was £6,500,000 in the years 1841-1850, reaches nearly £43,000,000 in the period 1901-1905, being more than six times, nearly seven times, as large as in the earlier period.

We cannot trace the coinages of the world farther back than for the last thirty years. The figures are as follows:—

TABLE II.—*Coinage of Gold and Silver of the Mints of the World, 1876-1905.*

Years.	Gold Coinage Value.	Silver Coinage Value.
1876	£42,624,000	£25,315,000
1877	40,323,000	22,872,000
1878	37,677,000	32,238,000
1879	18,151,000	20,978,000
1880	29,945,000	16,922,000
1881	29,403,000	21,602,000
1882	19,939,000	22,157,000
1883	20,969,000	21,861,000
1884	19,886,000	19,166,000
1885	19,152,000	25,353,000
1886	18,928,000	24,971,000
1887	24,999,000	32,682,000
1888	26,966,000	26,084,000
1889	33,780,000	27,873,000
1890	29,850,000	30,459,000
1891	23,907,000	27,659,000
1892	34,495,000	31,103,000
1893	46,484,000	27,591,000
1894	45,584,000	22,619,000
1895	46,217,000	25,375,000
1896	39,180,000	31,908,000
1897	87,544,000	33,558,000
1898	79,096,000	29,856,000
1899	93,223,000	33,246,000
1900	70,987,000	37,072,000
1901	49,619,000	27,783,000
1902	44,081,000	38,743,000
1903	48,099,000	42,359,000
1904	91,085,000	35,302,000
1905	49,191,000	34,544,000
	£1,261,884,000	£850,151,000

The statement of the production and consumption of gold in arts and industry, and the coinage of the world, given in the reports of the United States Mint, do not exactly correspond, but, considering the enormous figures involved, they are probably as close an estimate as can be made.

TABLE III.—*Production and Coinage of Gold, 1895-1905.*

Years.	Production.	Coinage of the Mints of the World.
1895	£40,081,000	*£46,217,000*
1896	40,450,000	*39,180,000*
1897	47,215,000	*87,544,000*
1898	57,376,000	*79,096,000*
1899	61,345,000	*93,223,000*
1900	50,915,000	*70,987,000*
1901	52,198,000	*49,619,000*
1902	59,209,000	*44,081,000*
1903	65,105,000	*48,099,000*
1904	69,378,000	*91,085,000*
1905	75,258,000	*49,191,000*
	£618,530,000	*£698,322,000*

The consumption of gold in the arts and industry during this period is estimated by the Director of the United States Mint as having been £157,178,000, and the recoinage as

£113,833,000. These figures, added to the coinages that are known of, amount collectively to £969,333,000. How much of the consumption in the arts was of old material cannot be traced. But the statement makes it fairly clear that a value fully equal to the production has been employed in the coinages of the world.

Meanwhile the amount of gold held by the great banks of Europe has steadily increased. The annual average of the total coin and bullion held by the Bank of England, which was about £14,600,000 in 1844, was £33,300,000 by 1900. The Bank of France, which possessed £46,500,000 in 1877, held, in round numbers, £107,000,000 in 1906, having parted with something like £7,000,000 in that year. At the Imperial Bank of Germany the gold held on December 31, 1876, was £2,000,000. This had increased to £24,000,000 by the end of 1906, having, like that held by the Bank of France, undergone a considerable diminution during the same year. The stock of gold in the European banks on the last day of 1905 is stated as follows in Table IV.:—

TABLE IV.—*Stock of Gold in European Banks, December* 31, 1905.

Country.	1905.
Bank of France	£111,091,000
Germany—Imperial Bank	28,680,000
Local Banks	2,230,000
Bank of England	27,522,000
Banks of Scotland	5,636,000
Banks of Ireland	2,779,000
Bank of Austria-Hungary	43,541,000
Bank of Belgium	3,783,000
Bank of Bulgaria	579,000
Bank of Denmark	4,979,000
Bank of Spain	14,514,000
Bank of Greece	39,000
Bank of Netherlands	6,446,000
Bank of Italy	24,009,000
Bank of Naples	5,442,000
Bank of Sicily	1,660,000
Bank of Norway	1,544,000
Bank of Portugal	1,042,000
Bank of Roumania	3,011,000
Bank of Russia	75,887,000
Bank of Finland	888,000
Bank of Servia	463,000
Sweden Royal Bank	3,667,000
Bank of Switzerland	4,091,000
	£373,532,000

The amount held by the Banks of England and Wales may be roughly estimated as £75,000,000: thus about £450,000,000 was held by European banks in 1905. The total stock of gold specie held in the principal countries of the world is estimated, in the reports of the Director of the United States Mint, as being at the end of 1896, £871,920,000, and in 1905, £1,296,700,000. This estimate refers to a population estimated as numbering 950,000,000 in 1905, while in 1896 the population of the strictly gold-using countries was estimated in a similar way as being 297,900,000.

After examining all these figures of the production of the precious metals and the coinages of the different countries of the world, we are led to [illegible] for the st[illegible] greater comm[illegible] as compared with [illegible] in California and [illegible] fact that the vast incr[illegible] followed by a lowering in [illegible] not by a general rise in prices.

Though the production is so enor[illegible] increased, the population which makes u[illegible] gold standard is also proportionately m[illegible] increased. The gold coin is no longer accumulated in two or three small centres, but it is diffused over the whole world. To a great extent also gold has taken the place of silver as the standard of value and as the means of circulation.

There is another point which particularly concerns us in England. The larger the number of countries which employ gold, the larger their seasonal requirements of specie become. We have an instance of this on a small scale in England, where the autumn demands for holidays and harvest run up probably to six or eight millions sterling (see AUTUMNAL DRAIN). In the United States and in Canada the requirements of this description are on a far larger scale, while those which follow on any time of stringency run up to enormous sums, as in the autumns of 1906-7. When these demands reach amounts which local supplies are inadequate to meet, this country is the first to which other nations turn as the cheapest market for gold. Hence, paradoxical as it may appear, it is probable that one of the results of the increase in the production and the use of gold will be that greater demands will be made on London, with the necessary corollary that larger supplies will have to be kept here to meet them if we are to maintain our position as the Clearing House of the world. But to discuss this further would lead us into questions beyond the limits of these remarks.

[*Annual Reports of the Deputy Master and Comptroller of the Mint*, London.—*Annual Reports of the Director of the Mint*, United States.—*Production of the Precious Metals, Annual Reports*, United States.—*Report on the Introduction of the Gold-Exchange Standard into China and other Silver-using Countries*, submitted to the Secretary of State, Oct. 1, 1903, by the Commission on International Exchange, Washington, 1903.]

GOSCHEN, GEORGE JOACHIM, VISCOUNT (1831-1907), was educated at Rugby and Oxford, where he took a first class in *Literis Humanioribus*. His father was a partner in the financial house of Frühling and Göschen, which he joined immediately on his leaving Oxford. He soon became a director of the Bank of England and entered Parliament in 1863. Into Lord Goschen's brilliant career in Parliament and the many services he rendered to the country, especially as First Lord of the

...ly ...nges, ... is still ...eports and ...lowed in 1872, ...ooks to call attention ... subject, as important in ... taxation. In the volume ...dresses on Economic Questions, ... 1905, Lord Goschen brought ...s most important minor writings ...eeches on these subjects, among which ...ay be specially mentioned the address he delivered in 1883 to the Philosophical Society of Edinburgh on *Laissez Faire and Government Interference*, in which he showed his alarm at the rapid advance of state socialism. Besides these Lord Goschen read a paper before the Institute of Bankers on April 18, 1883, on *The Probable Results of an Increase in the Purchasing Power of Gold*. Speaking as he did at a time when the annual supply of gold had fallen off from £36,000,000 a year in 1852, the first year after the gold discoveries, to about £20,000,000 a year, and following on a fresh demand for the precious metal through the establishment of new gold currencies established in Germany, Italy, and the United States, the increase in the purchasing power of gold occupied the minds of many almost as much as its depreciation had done in 1848. This paper was a valuable contribution to the elucidation of the extremely difficult and complicated questions involved in the then position of matters. Lord Goschen also published a biography of his grandfather, the publisher of Goethe and Schiller.

In 1890 the Royal Economic Society was ...ounded, Lord Goschen holding the office of president from that year till the date of his death.

The principal part of his economic work, however, was not done in his writings, but in Parliament, where, after holding high office under various administrations, he was Chancellor of the Exchequer, Lord Salisbury being Prime Minister, and between February 1887 and June 1892 he produced and carried through six budgets in succession. In addition to these he conducted in 1888 the immense operation of the conversion of the greater part of the National Debt, in round figures £558,000,000, from 3 per cent, first to 2¾ per cent, and then in 1903 to 2½ per cent, by which a saving of about £2,800,000 a year was made. The reform of the gold coinage, also executed during his term of office, though a much smaller thing in itself, was by no means unimportant, withdrawing as it did some £47,000,000 light-weight coins from the circulation—a work of great convenience to every one in the country, as the condition of the coin of the realm enters into the convenience of the whole population.

Lord Goschen was opposed to Mr. Joseph Chamberlain's policy of tariff reform, but he defended the re-imposition by Lord St. Aldwyn, then Sir Michael Hicks-Beach, of the 1s. duty on corn, though he was hostile to any large levy of revenue by taxes on food.

A career spent as Lord Goschen's was, partly in political and partly in business activity, necessarily leaves behind it few written records in comparison with its importance, but those who knew him will long remember his force of character and great acuteness of mind, joined with a width of judgment which rendered his opinions most valuable and influential.

HAGUE CONFERENCES (1899; 1907). The first Hague Conference was an assembly of representatives from twenty-six of the independent and civilised states of the world. They came together at the Hague on May 18, 1899, on the invitation of the Netherlands Government—the prime mover being the Emperor Nicholas II. of Russia, who, in August 1898, had proposed an International Conference with the twofold aim of checking and eventually reducing national armaments, and devising means for averting wars "by the employment of pacific methods of international di... the humanitarian enthusiasm of ... of course, pronounc... But public opini... tic expression a... e were statesmen d... e evils so forcibly described in ... rescript were capable of abatement, if not of removal. When a detailed programme was published in January 1899, it became evident that the scope of the proposed Conference had been enlarged by the inclusion of many subjects connected with the laws and customs of warfare. These were matters which appealed strongly to those who prided themselves on being practical as well as progressive. Accordingly, when the Conference met many of the delegates who had come to the Hague expecting to take part in a useless emission of pious hopes and benevolent aspirations were soon convinced, to quote the expressive words of Lord Pauncefote's despatch of July 31, 1899, that "with a little good-will it would be possible to arrive at a common understanding on some of the questions propounded." In fact, all of them were dealt with more or less successfully, except that of disarmament or the limitation of armaments; and, to quote again from the despatch previously cited, "in the brief space of two months, a great international work was accomplished.

fraught with the highest promise for the advance
ment of civilisation and the good of mankind."

But in reality the Conference won its greatest triumph by the mere fact of meeting and recording its wish that another Conference should assemble in the near future. It thus endeavoured to provide the society of nations with a legislative or quasi-legislative body. After some hesitation statesmen came to take for granted that a second Hague Conference must come together before long. The vigorous initiative of President Roosevelt of the United States of America brought matters to a head, though he soon surrendered the leading part to the Russian Emperor. Delays were caused, first by the Russo-Japanese war of 1904-1905, and afterwards by the Pan-American Congress of 1906, but, nevertheless, the second Hague Conference met in June 1907, and sat till October 18, 1907. Forty-six powers were represented at it, as against twenty-six at the previous assembly. Just as the first Conference assumed that it would soon be followed by another, so the second Conference assumed that similar gatherings would take place in future. It regarded itself as a world parliament, and made some kind of rudimentary provision for the periodical assembly of a series of successors, in order that they might deal as regular organs of civilised humanity with its collective concerns. The importance of these steps can hardly be overestimated. They have been taken quite quietly by men, most of whom were driven by forces they hardly comprehended towards aims of which they were scarcely conscious. They are a natural development of international society. They are, therefore, far more likely to be permanent than if they had been forced on by one masterful will, however just and good. Their full significance lies in the distant future. But we can discern even now that in the ethical sphere they mean that justice and reason are to count for more, and brute force for less, and that in the economic sphere they promise a fuller scope for the productive and constructive energies of mankind.

The first Hague Conference drew up three conventions, passed three declarations, gave expression to six wishes, and adopted with unanimity a resolution to the effect that the restriction of military budgets was "extremely desirable for the increase of the material and moral welfare of mankind." This resolution has been confirmed by the present Conference, with the addition that "in view of the fact that military charges have been considerably increased in all countries since that year, 1899, the Conference declares that it is highly desirable that the Governments should resume the serious study of this question." The British Government did its best to secure a more practical result; but the more the matter was examined the more difficult did it seem in the present state of feel-

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The second Hague Conference was greater than the first, not only in size, but in attempts, in achievements, and in failures. It produced no less than thirteen conventions. It renewed the three declarations of its predecessor. It passed, as we have seen, a resolution on disarmament, and it registered five wishes. But it tried in vain to reach an agreement on the law of contraband and blockade; it proved unable to settle the vexed question of the destruction of prizes at sea; and it laid down most imperfect rules with regard to submarine mines and the duties of neutral states in maritime warfare. Among the best results of its four months' activity may be mentioned the prohibition of the bombardment by naval forces of undefended ports and coasts, the establishment of the immunity of inshore fisheries and authorised mail bags, and the improvement of the work of the previous Conference in matters connected with the laws of warfare on land and the application of the principles of the Geneva Convention to warfare at sea. Restrictions of space compel the omission of many other topics which were dealt with more or less successfully by the delegates at the Hague. And it is necessary to add that at the present time, November 1907, no one can speak authoritatively as to the commitments of our own country with regard to the questions under discussion. The Conventions are left open for signature till June 30, 1908. Great Britain has not yet adhered to them; and though there can be no doubt that we shall in due time sign and ratify the greater number, it is quite possible that in the end two or three may be accepted with wide reservations, or even rejected entirely. International courts are most important and must be dealt with separately.

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the four so appointed were to choose a fifth.

Between 1899 and 1907 several cases were submitted to the Hague tribunal. The credit of providing the first of them rests with the United States, whose Government in 1902 referred to a court of arbitrators, constituted according to the provisions of the Hague convention, a long-standing dispute with Mexico as to the proper destination of what was called the Pious Fund of California. The Venezuelan Indemnities case followed. Great Britain and France were concerned in the Muscat Dhows case, and Japan and several other states in the Perpetual Leases case. So much satisfaction was felt with the decisions, that a strong desire arose for the further development of the principle of arbitration. The arrangements of 1899 were defective in two important particulars. They bound no power beforehand to place its case before a court, and the court they provided was left in a very nebulous condition. The recent Conference endeavoured to remedy both these defects. It attempted to formulate a list of subjects which the powers would bind themselves by treaty to refer to arbitration; and it endeavoured to create a permanent court ready at any moment to deal with whatever case might be brought before it by international litigants. The difficulties were too great to be overcome. Some arose out of procedure, some referred to the constitutions of various states, some were connected with the enforcement of awards on recalcitrant litigants, and some were due to the insistence by the smaller states on absolute equality with the greater powers as regards the constitution of the court. It may be hoped that a future conference will see a satisfactory settlement.

It is remarkable how the idea of international courts has developed side by side with the idea of an international legislature. The rudimentary court of the first Hague Conference will find its procedure considerably improved by the labour of the second Hague Conference, from whose deliberations yet another court is likely to result. Hitherto the validity of captures at sea has been tried in the courts of the capturing belligerent. As a result each maritime country has had its [illegible] law, and these laws have sometimes [illegible] each other in important particu[illegible]national prize court is to be [illegible] and in some cases [illegible]ses of maritime [illegible] courts of the captor. [illegible]cisions of this court will undoubtedly do much to harmonise conflicting systems, especially if a future Conference finds it possible to establish a code of maritime warfare by general agreement. Meanwhile it remains to be seen whether Great Britain will submit herself to the decisions of the International Prize Court unless the maritime powers come to a preliminary agreement on some of the important legal questions which baffled the Conference. In these matters the possibilities of to-day sometimes become the realities of to-morrow. The first Hague Conference was enabled to adopt a convention relating to the laws and customs of war on land, largely because a conference on the subject had sat at Brussels in 1874, and though it failed to obtain the consent of the Governments concerned to the code of rules it drew up, its proposals influenced both opinion and practice in a truly remarkable degree during the years that followed. May we not hope for a similar process with regard to the laws and customs of war at sea? The Conference of 1907 disappointed many expectations with regard to this branch of its work. But it will be succeeded by other conferences, and its discussions will be the seed of the harvests they will reap.

In some quarters great dissatisfaction has been expressed with the results hitherto achieved. But those who are loudest in lamentations and denunciations forget the great things that have been accomplished, and the strong foundations that have been laid for future work. If any one had predicted these things ten years ago he would have been laughed at for his pains. After centuries of effort the civilised portion of mankind has at last been placed on the road which leads to the substitution of law for force in international affairs. It remains for the earnest-minded and thoughtful to appreciate the greatness of the achievement, and generate the spiritual forces which will carry us onwards to the distant goal of universal peace.

[Holls, *The Peace Conference at the Hague*, New York, The Macmillan Co., 1900.—British Parliamentary Papers, *Miscellaneous*, No. 1. (1899).—Higgins, *The Hague Conference*, London, Stevens & Sons, 1904.—Holland, *The Laws and Customs of War on Land*, London, Harrison and Sons, 1904.—Barclay, *Problems of International Practice and Diplomacy*, London, Sweet and Maxwell, 1907.—Westlake, *International Law*, vol. ii. ch. xi., Cambridge University Press, 1907.] (See ANGARIE, DROIT DE; BLOCKADE; CONTRABAND; DECLARATION OF WAR; ENEMY GOODS; INTERNATIONAL LAW; NEUTRAL MARKETS; NEUTRAL PROPERTY.)

T. J. L.

HANSSEN, GEORG (1809-1894), was born at Hamburg and educated there until 1827, when he went to Heidelberg University to study jurisprudence and political economy. Here he came under the influence of RAU. Later he studied agriculture at Württemberg, and finally graduated at Kiel, where also he lectured. In 1834 he was appointed to a post in the government of Schleswig-Holstein at Copenhagen, and was nominated to the Chamber in 1835. In 1837 he returned to Kiel as professor of Political Economy and Statistics; from 1842 he taught Political Economy at the University of Leipzig till 1848, moving then to Göttingen, where he remained till his death—with an interval from 1860 to 1869, during which he held

a professorship at the University of Berlin and a post in the Royal Prussia Bureau of Statistics. In 1869 he resumed his professorial chair at Göttingen, which he gave up in 1884.

Agriculturæ doctrina Cathedris Universitatum Vindicata. Dissert. inaugur., Altonæ, 1832.—*Ueber die Errichtung von Sparkassen mit besonderer Rücksicht auf Landdistrikte*, Leipzig, 1845.—*Agrarhistorische Abhandlungen*, 2 vols., 1880, 1884 (his most important work). He also contributed largely to periodicals and collective works. Many of his articles and works dealt with details of the economic position of Germany, with the duchy of Schleswig-Holstein, and with agriculture.

[See *Economic Journal*, vol. v., London, 1895.—*Handwörterbuch der Staatswissenschaften*, giving complete list of works, vol. iv., Jena, 1900.]

HELM, ELIJAH (1837-1904), was the son of a Blackburn cotton-spinner and manufacturer. He was educated at Whalley Grammar School and at Blackburn. On leaving school he entered the cotton trade, and spent a few years at Padiham, where he acquired a knowledge of cotton spinning and weaving. In 1855 he entered a warehouse at Manchester, and continued in the business until, in 1889, he was elected to the post of secretary of the Manchester Chamber of Commerce, of which he had been director for three years. This appointment he held till his death in 1904.

When a young man he attended the evening classes in Political Economy at Owens College, and here came under the influence of JEVONS, and when the latter died Helm lectured at the college until his successor was appointed. He also lectured for a few sessions on Political Economy to the evening classes at the college. The honorary degree of M.A. was conferred upon him in 1902 by the Victoria University. He was an active member of the Manchester Statistical Society, of which he was president for the two sessions 1879-81. Mr. Helm was one of the chief authorities on the economics of the cotton industry, and was well known as journalist and author. He began to write for the *Manchester Guardian* about 1875, and for many years wrote leading articles on financial and commercial questions, especially those relating to India, and on the cotton trade. He was also a frequent contributor to the *Statist*, the *New York Nation*, and other commercial and financial journals in England and America.

His chief writings are—

Chapters in the History of the Manchester Chamber of Commerce, 1899.—*Introduction to Young's American Cotton Industry*, 1902.—The chapters on the Cotton Industry which appear in *British Industries*, Ashley, 1903.—Contributions to the Manchester Statistical Society, published in the Transactions, on the Cotton Trade, Trade Unions, Crises, Bimetallism, etc.—*The Joint Standard*, 1894, attacking the monometallic system, and advocating the establishment of the joint standard. In this dictionary he wrote the articles on CHILDREN'S LABOUR, COTTON FAMINE, and the MANCHESTER SCHOOL. For many years he rendered much service as a social worker in Manchester and district. J. H. J.

HERRMANN, EMANUEL[1] (1839-1902), was born at Klagenfurt in Carinthia and educated at his native place from 1848-1856. He afterwards studied Jurisprudence, History, and Natural Science at various universities, finally proceeding to the degree of Doctor of Law at Gratz in 1862, and acquiring the right to lecture there in 1864. In 1865 he became a lecturer (Dozent) at the Technical University, and Professor at the Trade Schools, in Economics and Statistics, whilst after various similar appointments he obtained the Professorship of Economics and Financial Science at the Technical Academy at Vienna in 1871. He had, however, since 1861 been occupied with work on the Civil Service, and in 1872, though he did not give up his professorial duties, he became head of the newly-formed departments for furthering trade and industry at the Austrian Board of Trade. His position appears to have been somewhat similar to that held by permanent officials in England, as he served under and was controlled by the ministry of the day, and he appears to have played a somewhat similar part in organising the work of his department to that of Sir Robert Giffen and others at the English Board of Trade. The first work of importance that was undertaken was the foundation, apparently by Dr. Anton Bauhaus under his direction, of a large number of the technical schools which did much for the prosperity of many Austrian industries, and which have been to a great extent copied by foreign countries. The condition of Domestic Industries in Austria appears to have occupied much of his thought, for he published an article entitled "Hausindustrie" on the subject in 1873, and in his *Technische Fragen und Probleme der Modernen Volkswirthschaft*, 1891, he speaks of the sad impression he had obtained of their condition. In 1882 he was elected to Professorships in Economics and Finance, in[cluding] one at the Viennese Tec[hnical] versity, and his retirement f[rom] Trade in this year h[ad] absence during [the] devoted to th[e] He still continued [to] Privy Councillor conferred on him in [18]
before his death also became Aulic Councillor (Hofrath). He is one of the two men to be credited with the invention of the Postcard. After his retirement he still continued to publish books at fairly frequent intervals, some of the most important being written between 1882 and 1896.

[1] Referred to as Emil Herrmann in the *Economic Journal*, December 1902.

His work at the Austrian Board of Trade seems to have influenced his development as an economist. His earlier works, though showing signs of those technical and other interests that are so marked in his later ones, are yet mainly—as for instance the *Allgemeine Wirtschaftslehre*, 1868—of a theoretical character. He seems, indeed, to have conceived of a wide general system of economics, with narrower applications to narrower areas. "He had especially in view in his work the relations of technical to industrial developments, and also the creation of a system in which Universal Economics should be the basis, and national and communal economy the superstructure" (*Handwörtgrbuch der Staatswissenschaften*, q.v.). In his later works, and especially after his retirement from the Board of Trade, his devotion to technical questions connected with Economic Science and their application to it was most marked.

His chief works were:—*Allgemeine Wirtschaftslehre*, 1868.—*Theorie der Versicherung vom Wirtschaftlichen Standpunkte*, 1868, 3rd ed. 1897.—*Leitfaden der Wirtschaftslehre*, 1870.—*Miniaturbilder aus dem Gebiete der Wirtschaft*, 1872.—*Principien der Wirtschaft*, 1873.—*Kultur und Natur, Studien im Gebiete der Wirthschaft*, 1887.—*Volkswirthschaft und Unterricht*, 1888.—*Die Familie vom Standpunkte der Gesamtwirthschaft*, 1889.—*Sein und Werden in Raum und Zeit, Wirtschaftslehre Studien*, 1889.—*Technische Fragen und Probleme in der Modernen Volkswirthschaft*, 1891.—*Wirthschaftliche Fragen und Probleme*, 1893—and *Das Geheimnis der Macht*, 1896. [See *Handwörterbuch der Staatswissenschaften* for a biography of Dr. Herrmann by the Editors, Jena, 1900.] N. B. D.

HOLYOAKE, GEORGE JACOB (1817-1906), born at Birmingham, was a weakly child, brought up in poverty. From the age of nine to twenty-two he worked as a whitesmith, when seventeen he obtained some education at the Birmingham Mechanics' Institution and gained prizes in mathematics. In 1839 he became superintendent of the educational classes at the Institution, and afterwards kept a day school in Sheffield. He was appointed a lecturer in 1841 to explain the social system of Robert OWEN, and in the following year was imprisoned at Gloucester for six months for alleged atheism, being the last person put on trial for this cause in England. In 1846 he came to London and started *The Reasoner*, which he edited for twenty years. He opened a bookseller's shop in Fleet Street in 1853. In the course of a long and strenuous life he wrote much on political and social questions, advocated the system of thought which he was one of the earliest to call secularism, and took an active part in the promotion of co-operation, temperance, and education among the working classes.

Holyoake told the story of his struggles in *Sixty Years of an Agitator's Life*, 1892, 2 vols. 8vo, and in *Bygones worth Remembering*, 1905, 2 vols. 8vo; the last work describing the progress of the nation within his memory, with special reference to the conditions of life among manual workers. He remembered when men were only paid late on Saturday night, and "poor nailers trudged miles into Birmingham, with their week's work in bags on their backs, who were to be seen hanging about merchants' doors up to ten and eleven o'clock to get payment for their goods."

His writings on co-operation are: *Self-Help for the People, the History of the Rochdale Pioneers*, 1857, 10th ed. 1893, sm. 8vo (the earlier chapters appeared in the *Daily News*); *Life and Last Days of R. Owen*, 3rd ed. 1866, 8vo; *The Logic of Co-operation*, 1873, 8vo; *The History of Co-operation in England*, 1875-79, 2 vols. 8vo, revised and completed 1906, 2 vols. 8vo; *Manual of Co-operation*, New York, 1885 (an epitome of the *History* arranged by the Sociological Society of America); *Growth of Co-operation in England* (from *Fortnightly Review*), 1887, 8vo; *Policy of Commercial Co-operation*, 1888, 8vo; *The Co-operative Movement of To-day*, 1891, sm. 8vo; *Self-Help One Hundred Years Ago*, 1888, 8vo (describes the Society for Bettering the Condition and Increasing the Comforts of the Poor, established in 1796); *Ten Letters, being the Case stated between Co-operators and Private Traders*, 1903, 8vo. H. R. T.

IMMIGRATION, ALIEN, see ALIEN IMMIGRATION in Appendix.

INCOME TAX, POSITION OF, IN FRANCE. It is as well to mention that the general Income Tax, that is to say, a tax touching within certain limits the whole income of the tax-payer, as in this country, Germany, or Switzerland, does not yet exist in France, in spite of many bills successively laid before parliament during the last twenty years endeavouring to establish it.

But as it is quite possible that the result of the proposal made at the present time (1907) by the finance minister of France, M. Caillaux, may not be known before these pages are printed, we make this reference to it here to explain matters in case the principle of the tax is agreed to. The present proposal rouses the most vigorous protests. The reasons for this resistance in France are many. The following are some of them:—

It is believed that the fear that an Income Tax may be established is likely to diminish the inclination of private purchasers to hold French *rente*. To this feeling the diminution in the amounts held in the inscribed stock of irredeemable *rente* between 31st December 1902 and 31st December 1903 also bears witness, because the holder of the inscribed stock would be known, but the holder of a bond payable to bearer would not. The holders of French *rente* are able to convert their holdings from inscribed stock to bonds payable to bearer with

coupons attached whenever they please, and to convert them back again without charge.

At the present time all the incomes proposed to be submitted to the Income Tax are also touched by taxation already, only these taxes are not based on the declaration of the taxpayer, but are levied according to certain legal presumptions, as, for example, the PATENTE (*q. v.*) which still continues, and apparently it is not proposed to repeal. The *Patente* touches all lucrative industries (manufacturers, merchants, and certain liberal professions, lawyers, etc., but not agriculturists); it is levied, not according to the profits made, but on a complicated calculation which takes for the basis the amount of the rent paid, the number of persons employed, the population of the town, and also the special category to which the business belongs.

It may even be said that there is a general tax on income in *La Contribution Mobilière*. This is a most complicated tax. It is based on the rent of the dwelling-house, and is leviable when the house is furnished. The only classes of income which are not taxed at the present time are: the salaries of functionaries, the incomes arising from labour, the interest on Government *rente*, and the interest on debts paid by individuals. Under these circumstances the establishment of a tax upon French *rente* may not be found possible.

INCOME TAX STATISTICS—USE OF, IN ESTIMATING THE NATIONAL INCOME. Estimates of national income have always been largely based on Income Tax assessments, and such estimates have been commoner in this country than elsewhere, owing no doubt to the existence since 1842 of an Income Tax in England. The most important of these calculations have been Mr. Dudley Baxter's *National Income*, 1868, Mr. Leone Levi's *Wages and Earnings of the Working Classes in 1881*—following similar researches in 1867 and 1879; others, dealing also with the incidence of taxation upon different classes, are: one in the *Edinburgh Review*, January 1860, one by Sir Louis Mallet in 1885, and Mr. Sanger's articles in the *Yale Review*, February 1898, and *Economic Journal*, March 1899. To these must be added Sir Robert Giffen's estimate before the Financial Relations Commission, 1894-96 (Q. 7723); his *Economic Inquiries*, 1904, vol. ii. p. 364; and his *Growth of Capital*; Mr. A. L. Bowley's *National Progress in Wealth and Trade since 1882* (1904); Mr. Inglis Palgrave's article "The Economic Condition of the Country" (*National Review*, November 1903); and Mr. Bowley's "Tests of National Progress" (*Economic Journal*, September 1904), in which he analyses the Income Tax returns in detail and gives the latest carefully reasoned estimate of the total National Income, viz. £1,800,000,000. In all of these the method followed has been to get at a sum total of individual incomes by estimating and adding together the total incomes of three classes of the community, viz.: (1) the manual labour class, from official and unofficial estimates of wages and unemployment—see, *e.g.*, the *Board of Trade Fiscal Blue Book*, C.D. 1761, 1903, p. 361; (2) the class above manual labour but below the Income Tax limit, based on an assumed family income (Baxter and Levi) in the absence of independent estimates of earnings; and (3) the Income Tax-paying classes, *i.e.* all those whose income exceeds £160 per annum. The latest estimates for the total incomes of the latter class are those which were given in evidence before the Select Committee on Income Tax (House of Commons, 365 of 1906), viz. £830,000,000 (Mr. Money, M.P.), £750,000,000 (Mr. Bowley), and £728,000,000 (Sir H. Primrose), who proposed to deduct from this total an estimated sum of £50,000,000 as representing non-personal income to arrive at a total of individual incomes. All these estimates were based exclusively on the Income Tax assessments.

The utmost caution, however, is necessary in using the Income Tax returns either for the purpose of estimating the National Income or of testing its growth. As Mr. Bowley observed (*Economic Journal*, vol. 1904, p. 461): "They are full of concealed pitfalls, and it is unsafe to travel in those regions without a guide." Lord Goschen (*Essays and Addresses*, 1905, p. 244) commented on these pitfalls, and explained that "the methods by which the Income Tax is levied and the grouping of the figures by the Inland Revenue in their tables have naturally been devised from the point of view of administrative efficiency and not for the purpose of scientific inquiry." One of these difficulties arises out of the use of the terms "gross" and "net." The *46th Report of the Inland Revenue Commissioners* (1903), p. 172, remarks that "it is by the figures of gross income that national prosperity is to be measured." It is true that for purposes of comparison either "gross" or "net" figures, provided that they were throughout taken on the same basis and that no disturbing circumstances had occurred, would be equally useful. This, however, is not the case. These terms have not been used throughout the Reports and for different schedules in the same sense. There have also been alterations both in the limit of exemption (£100, £150, £160, at different dates) and in the abatement limits, such as those which forced Lord Goschen, who examined all the indications supplied by the Income and other taxes, to apply all sorts of "harassing qualifications" to his deductions as to the "growth of moderate incomes" in the volume above mentioned. Finally improvements in administration have undoubtedly accounted for

some portion of the increase in the assessed income of the country, and the increasing conversion of private trading concerns into public companies has immensely facilitated the assessment of income and the collection of the tax. These causes must to some extent vitiate comparisons. Whether the "gross" or the "net" assessments afford the best indication is a further question. The "gross" assessments (Table clxxii. of the *Inland Revenue 49th Report*, 1906) do not correspond to the income on which tax is received. They include, for instance, a mass of incomes under £160 per annum and of double or excessive assessments which do not represent income at all. Therefore though they have been used by some inquirers, *e.g.* Mr. Levi, they cannot be taken as the real income of the Income Tax-payers. But it is equally impossible to rely on the totals of "net" assessments alone (Table clxxvi.), for to that total must be added (from Table clxxv.) the income to which abatement allowances and life insurances are applicable, the income of charities, etc., exempt from Income Tax (unless individual incomes alone are required), together with an estimate for income evaded or under-assessed, and for certain purposes a deduction for taxed income belonging to foreigners. This seems to be the method followed by recent inquirers. Another possible pitfall is an assumption often made that the classification of Schedule D assessments (Table ccxxx.) supplies evidence of total income or total number of taxpayers. Yet another is that mentioned by Mr. Inglis Palgrave in his "The Economic Condition of the Country" (*National Review*, November 1903), in which he pointed out that the improved yield of the 1d. in the £ of the Income Tax cannot be taken as an index of the growth of wealth unless the growth of population is also brought into the account. The figures of the produce of the 1d. as they stand in Table clxx. are compiled for revenue purposes, not for the purpose of testing the growth of income. For some purposes of this latter kind, however, the assessment of the Income Tax by schedules automatically provides useful statistical material. It enables us for instance to gauge the growth of income from foreign investments (Table clxix.). If general statistical information were aimed at, such analyses might probably be carried a good deal further, and classifications provided which would illustrate the progress or the reverse of many of the leading industries in the country. For certain other purposes the Income Tax statistics are, owing to structure of the tax itself, not naturally available. They do not tell us, for instance, the number of Income Tax-payers or the distribution of income among them. Mr. Chiozza Money in *Riches and Poverty*, 1905, has shown how deductions may usefully be drawn from them on these points, and they have recently been interrogated with interesting results as regards incomes to which the abatement allowances apply (see evidence by various witnesses before the Select Committee on Income Tax, 1906); but they do not yield information for other classes such as is yielded by the admirable statistics of the Prussian and Saxon Graduated Income Taxes. There is, however, no doubt a quantity of valuable statistical material in connection with the collection of the Income Tax (as well as of the Death Duties and House Duty) which might be utilised if any institution in the nature of a Central Statistical Bureau, which statisticians like Lord Goschen and Mr. Bowley have suggested, and which was recommended by the Official Statistics Committee of 1878-79, existed in this country.

The Income Tax assessments, with the limitations and possibilities thus indicated, supply, of course, only one among many indications which must be consulted before any estimate of National progress can be attempted. Besides wages, there are the banking and savings bank statistics, statistics of consumption, and the statistics of export and import trade, to which should be added statistics of home trade and production and census statistics—see Mr. A. L. Bowley's *National Progress in Wealth and Trade since 1882* (1904), a forcible plea for the better organisation of the statistical information bearing on this question. And as regards the Income Tax itself, a serious question arises, connected not with the form of the statistics, but with economic considerations, which an inquirer must answer before he can decide how far a growth of the assessments is a real guide to national progress. It has often been maintained that certain classes of income, described by Mr. Levi as "second hand" or "dependent" incomes, ought to be excluded from the calculation in computing the national income; such incomes especially as are derived in increasing numbers in the form of salaries from the State or municipalities, *i.e.* from taxes and rates. The question may be taken in connection with that raised by J. S. MILL when, in the introduction to his *Principles of Political Economy*, he maintained that the National Debt cannot be counted as part of the national wealth, nor the interest on it as a part of the national income. And if the argument involves the exclusion of the interest on the National Debt on the ground that this interest is paid out of the income of other people, and the assumption that to include it would be to count "one portion of the general income twice over," does it apply equally to the case of all "second-hand" incomes — not only to the incomes derived from the State or from municipalities, *i.e.* from taxes or rates, but also to incomes like those of employees of public companies or those paid by private employers?

The theory alluded to was accepted by Mr. Dudley Baxter, who accordingly in his estimate of the National income in 1868 divided income into that of the "Productive," "Auxiliary," and "Non-productive" classes; and also partially by Mr. Leone Levi in 1885 when he gave what he called a "gross" and "net" figure of National income. Sir Robert Giffen in his *Growth of Capital*, it may be added, excluded the National Debt from the computation—not proportionately a very serious deduction from his total figures,—but in giving his reason he said (p. 21) that he "should not censure very much any one who included the National Debt as a part of the capital of the community."

More recent calculations of the national income do not appear to have made these allowances for "second-hand" income, to which indeed no very practical importance seems ever to have been attached, inasmuch as in the comparison of the growth of the National income founded on Mr. Baxter's and Mr. Levi's figures their "gross" figure has usually been quoted. Theoretically, however, and in some senses practically, the point is of importance. Take the case of a landowner and a manufacturer respectively each with a gross income of £50,000 a year. The landowner may pay £5000 a year in rates and taxes, £1000 to an agent or secretary, and £300 to a cook. On Mr. Levi's theory not only would these payments have to be deducted before reaching the taxable income, but all other payments in the shape of wages or ordinary expenses of living which go to form the income or increase the profits of any other person. This is obviously not the practice on which taxation of his income would be based in this or any other country. Income Tax would be payable on the whole £50,000, and again on the incomes passed on from it in exchange for services rendered to other persons, in which case fresh incomes are called into existence. The same remark is true of the income of the manufacturer, with an important exception, viz. that all salaries and wages which he paid in the course of his business would be allowed as a set-off against his gross income, so that supposing that these payments amounted to £30,000 a year, he would pay Income Tax only on £20,000 a year. There is then from this point of view a difference of treatment as between Schedule A and Schedule D, the "gross" and "net" figures not being on the same basis in the two Schedules, but this hardly affects the general argument. As this argument runs, an individual's income consists not merely of money, but of the various commodities, services and enjoyments consumed within the year and measured in money, plus savings. It is this which is the measure of his annual share of wealth and of his ability to bear taxation. If our landowner's money income is reduced by £5000 for taxes, he receives services in exchange for it, and so with the salaries paid to his agent or cook. And the civil servant, town clerk, or agent who may be indirectly remunerated out of this and similar incomes each creates an addition to the annual product by the fresh income which his service represents, and is rightly called upon to pay tax upon such income. If Prof. Marshall's definition of national income (*Principles*, p. 136; see p. 79, 5th ed.) be admitted, that "Everything that is produced in the course of a year, every service rendered, every fresh utility brought about, is a part of the national income," then this income must be composed of the aggregate of all individual incomes in the general sense above described; and in that case the validity of the practice of basing calculations of the national income—as regards the Income Tax-paying class—upon the Income Tax returns may, in so far as those returns contain "dependent" incomes of all kinds, apparently be admitted.

[A full discussion of the economic point will be found in the late Sir L. Mallet's essay on "National Income and Taxation" (1885), *Free Exchange*, pp. 167-180. See INCOME TAX IN THE UNITED KINGDOM, vol. ii. for history and bibliography; MUNICIPALITY, vol. ii.; and MUNICIPAL AND GOVERNMENT TRADING, Appendix.] B. M.

INGRAM, Dr. JOHN KELLS (1824-1907), was an economist of considerable ability, with a wide knowledge of many collateral subjects. The first work which brought him into notice was his vigorous poem on the disturbed state of Ireland at the close of the 18th century. On being asked in 1892 as to how far the sentiments of his poem, "Who fears to speak of Ninety-eight?" represented his later views, Dr. Ingram answered, "You will not suppose that the effusion of the youth exactly represents the convictions of the man. But I have never been ashamed of having written the verses. They were the fruit of genuine feeling" (*Times*, May 4, 1907). He was for many years senior Fellow and Vice-Provost of Trinity College, Dublin, where at seventeen he had been elected a scholar and later won a fellowship. In 1878 he was President of the Statistical Section of the British Association, having filled the office of president of the Statistical Society of Ireland. This *Dictionary* was largely indebted to him for many notices of foreign economists, on which his intimate study of modern literature, both English and foreign, enabled him to work with great skill and freedom. It was in the same spirit that he wrote his principal work, *A History of Political Economy*, published in 1888, founded on his article in the 9th edition of the *Encyclopædia Britannica*. The object with which this history is written is sufficiently explained in the following extract from the preparatory note to the volume, as being "rather to exhibit the historic development of economic thought in its relations with general philosophic ideas, than to give an exhaustive account of economic

literature. An attempt has, however, been made, so far as was consistent with the main design, to notice all the really important works on the science." Commencing with Plato and Aristotle, and including Pliny and Cicero, the volume embraces an enormous amount of valuable information. The influence of Thomas Aquinas and the canonists is described. The mercantile system, Petty and Locke, Turgot, the Physiocrats, Adam Smith, J. S. Mill, Cairnes, down to Henry Sidgwick, Bagehot, Cliffe Leslie, and Jevons, all received notice, with remarks on the course which the study has taken both in England and the principal countries of Europe. The masterly knowledge of the subject which the book displays causes only regret that the writer did not carry his labours further. The manner in which the volume is put together, presenting as it does a mere outline where a detailed work was necessary, prevents the volume from exercising the influence on the general reader which it ought to possess. The student will find in it a mine of learning which he will do well to explore.

INSURANCE AGAINST UNEMPLOYMENT. See UNEMPLOYED, Appendix.

INTERNATIONAL LAW. Since the article in vol ii. was written many developments have taken place. It is impossible to do more here than allude to a few of the most important of them. The acquisition of territorial rights smaller than those of complete and exclusive sovereignty has ceased to be exceptional. Great Britain shares with Egypt a *condominium* in the Soudan. Several Powers have leased territory from China. A large number of Protectorates over districts inhabited by barbarous or semi-barbarous tribes have come into existence; and even such nebulous entities as Spheres of Influence have been created in abundance. A code for the regulation of war on land, and another for the protection and direction of red-cross work at sea, were agreed to at the first HAGUE CONFERENCE, and improved at the second, which prohibited the commencement of hostilities without due warning and the bombardment of undefended ports, and exempted inshore fishing boats and authorised mail-bags from hostile seizure. Moreover, progress has been made in the creation of international courts. But many burning questions remain for future settlement; for example, the scope of the doctrine of continuous voyages and the limitations on the use of submarine mines.

[Nys, *Droit International.*—Rivier, *Principes du Droit des Gens.*—Perels, *Das Internationale Oeffentliche Seerecht.*—Westlake, *International Law.*] T. J. L.

INTERPOLATION. In statistics falling into a series (such as statistics of population or wages over a period of years), figures obtained by actual observation may be available at certain points only in the series, and if for any purpose the figures for intermediate points are required they must in some manner be inferred. The process of estimating and filling in the intervening figures is spoken of as *statistical interpolation*. Thus, supposing that the census of population is taken every ten years only, we must obtain the figures for the intermediate years, if we are to have them at all, by interpolation. In a case of this kind the decennial figures will enable us to calculate the proportionate increase (or decrease) over a given period, and our process of interpolation will probably be based on the assumption that the rate of increase (or decrease) throughout the period in question has been uniform. The problem of statistical interpolation is often a complex and difficult one, and mathematical principles of a more or less elaborate character are involved.

[For further details, reference may be made to Bowley's *Elements of Statistics*, chap. x., and to Elderton's *Frequency Curves and Correlation*, pt. i.]

JUGLAR, CLÉMENT (1824-1905). A physician by profession, he took an early interest in economic problems, for he was elected in 1852 a member of the *Société d'économie politique* of Paris; still, the researches into the origin and development of commercial and financial crises, by which he made himself known, were only initiated a quarter of a century later.

He began by expressing his views in numerous pamphlets and reprints of articles contributed to the *Journal des économistes*, the *Économiste français*, and the *Journal de la statistique*; his only extensive work is entitled *Des crises commerciales et de leur retour périodique en France, en Angleterre et aux États Unis* (Paris, 2 vols., 1889, with diagrams); see also his article "Crises Commerciales" in Léon Say's *Nouveau Dictionnaire d'économie politique* (vol. i., 1891).

He lays great stress on the three unfailing successive periods which he discovers in every crisis: the period of growing activity, and latterly of inflation leading to a short period of *explosion* followed by a protracted and painful period of *liquidation*, generally lasting several years. The *explosion* is sure to occur at the end of a long period of rising prices, when no *new* buyers appear on the market, and the banks are compelled to resist the drainage of their metallic reserves. Their balance sheets are thus the barometer in which can be read the approach of a crisis, and this reading combined with the observation of the movements of prices, the rates of discount, and the foreign exchange with the fluctuations of exports and imports, makes it even possible to determine the state of affairs prevailing at the moment. It has been objected that these conclusions can only be applied to ordinary commercial or monetary crises, but are deficient when the crisis is the result of a wide change in the conditions of production. E. CA.

KNIES, KARL (1821-1898), born at Marburg, Hesse, lectured for a short time on History and Political Economy at the University of that town and taught Political Economy at the Polytechnic School at Cassel. Later, after a brief absence from Germany owing to the political disturbance of 1848, he was appointed, 1855, Professor of Political Economy at the University of Freiburg, Baden. From 1861 to 1865 he was occupied in politics, sitting in the second Chamber of the Diet of the Grand Duchy of Baden as member for the University, his sympathies being with the liberal party. He was made President of the Board of Education in 1862. In 1865 he returned to university life as professor of Political Economy at Heidelberg, which office he held till shortly before his death.

Knies is distinguished as the earliest and most energetic promoter of the historical method of economic science in Germany. His principal work was *Die politische Oekonomie vom Standpunkte der geschichtlichen Methode*, 1st ed. 1853, 2nd ed., much enlarged, 1883. He also wrote on mercantile questions—Money, Capital, Credit, Value, Transport and the means of Communication, to the literature of which subjects he made valuable additions as well as to the study of the science of statistics. His faculty of close reasoning and power of analysis were remarkable.

Besides the works mentioned above, he wrote: *Die Statistik als selbständige Wissenschaft. Zur Lösung des Wirrsals in der Theorie und Praxis dieser Wissenschaft. Zugleich ein Beitrag zu einer kritischen Geschichte der Statistik seit Achenwall*, Cassel, 1850.—*Die Dienstleistung des Soldaten und die Mängel der Konskriptionspraxis. Eine volkswirtschaftlich-finanzielle Erörterung.* Freiburg in Breisgau, 1860.—*Zur Lehre vom volkswirtschaftlichen Güterverkehr*, 1862.—*Geld und Kredit*, Berlin, 1873.—*Weltgeld und Weltmünze*, Berlin, 1874.—*Karl Friedrichs von Baden brieflicher Verkehr mit Mirabeau und Dupont.* Published by the *Badischen Historischen Kommission.* Arranged, with an Introduction giving a short history of the period preceding the first French Revolution and of the Physiocrats, by K. Knies, 2 vols. Heidelberg, 1892. He also contributed many articles to collective works and periodicals.

[See *Economic Journal*, vol. ix., London, 1899.—*Handwörterbuch der Staatswissenschaften*, giving complete list of works, vol. v., 1900.]

LABOUR COLONIES. See INDUSTRIAL COLONIES, Vol. II., and UNEMPLOYED, Appendix.

LABOUR EXCHANGE. See Vol. II., and UNEMPLOYED, Appendix.

LLOYD, The REV. WILLIAM FOSTER, F.R.S. (1794-1853), was educated at Westminster and Christchurch, Oxford, at which university he was Drummond Professor of Political Economy 1835-37. He discusses the question of utility and value. In this he anticipated "more than a generation before its rediscovery by JEVONS, MENGER, and WALRAS" the theory of marginal utility. He considers that not only can value not be intrinsic, but the utility of an object is not intrinsic any more than value. Utility, like value, is predicated of an object with reference to the wants of mankind.

With regard to value he holds "the proud position of having been the first thinker in any country to advance what is known to-day as the marginal theory of value, and to explain the dependence of value, on marginal utility."

The complete list of Lloyd's published Oxford lectures is as follows:—

Two Lectures on the Checks to Population, delivered before the University of Oxford in Michaelmas Term 1832, Oxford, 1833.—*A Lecture on the Notion of Value as distinguishable not only from Utility, but also from Value in Exchange, delivered before the University of Oxford in Michaelmas Term 1833*, Oxford, 1834.—*Four Lectures on Poor Laws, delivered before the University of Oxford in Michaelmas Term 1834*, Oxford, 1835.—*Two Lectures on Poor Laws, delivered before the University of Oxford in Hilary Term 1836*, Oxford, 1837.—*Two Lectures on the Justice of Poor Laws, and one Lecture on Rent, delivered in the University of Oxford in Michaelmas Term 1836*, Oxford, 1837.—*Lectures on Population, Value, Poor Laws, and Rent, delivered in the University of Oxford during the years 1832, 1833, 1834, 1835, and 1836*, London, 1837.

[See notice in *On some neglected British Economists*, by Professor E. R. A. Seligman, *Economic Journal*, London, 1903.]

LONGFIELD, MOUNTIFORT (1802-1884). We may quote in addition to the notice on Longfield in vol. ii. from Professor Seligman's reference to his writings. "Longfield's general theory of value is noteworthy, in that he not only puts very lucidly the influence of cost of production upon the supply side of the equation between supply and demand, but calls attention to the demand side as well." He expounds "the doctrine of marginal demand. It is this marginal idea which he applies to the supply side of the schedule as well, and which results in his most characteristic contribution to economics." In his writings "we have an exposition of the theory of marginal cost, as well as that of marginal demand. It is in the theory of profits and interest that we find the

application not only of the marginal idea, but of the productivity idea as well, thus combining to form the conception of marginal productivity."

Professor Seligman continues: "The discovery of the marginal productivity theory of interest is not Longfield's only claim to distinction. In his theory of wages he also marks a decided advance." According to him, the correct theory may be summed up in the statement that "the wages of the labourer depend upon the value of his labour, and not on his wants whether natural or acquired."

Space does not allow us to quote further from Professor Seligman's remarks on Longfield; he is also mentioned by Mr. Cannan, who states in reference to his originality, that Longfield in his Dublin lectures "ignores altogether the doctrine that wages depend on the proportion between capital and population," and while considering that Longfield has not completely mastered the subject, he remarks that "his theory shows a great advance on that of James Mill, Ricardo, and M'Culloch." [See notices on these writers.] Again, in regard to profit as discussed by J. S. MILL, Cannan remarks, that Longfield "had approached far nearer to a true appreciation of the causes which determine the rate of profit."

[E. R. A. Seligman, "On some neglected British Economists," *Economic Journal*, 1903. — E. Cannan, *A History of the Theories of Production and Distribution in English Political Economy from 1776 to 1848*, London, 1903.]

MACLEOD, HENRY DUNNING (1821-1902), M.A. Cambridge, and barrister (1849), writer on banking and economics, was a man of vigorous personality, with much industry and historical knowledge, but of mediocre judgment.

The whole or parts of some of Macleod's works were reissued under new titles. His most useful publication was *Dictionary of Political Economy, biographical, bibliographical, historical, and practical*, 1863, vol. i. large 8vo. A–C only appeared. In 1878 he advertised a second edition of vol. i., and stated that vol. ii. completing the work was in progress. Five editions were published of his *Theory and Practice of Banking*, 1st, 1855-56; 2nd, 1866; 3rd, 1875; 4th, 1883-86; 5th, 1892-93, 2 vols. 8vo. An Italian translation was produced in the *Biblioteca dell' Economista*, 1879.

He also wrote *The Elements of Political Economy*, 1858, 8vo. The second edition was entitled *The Principles of Economic Philosophy*, 1872-75, vol. i., vol. ii. part 1, 2 vols. 8vo. (severely criticised by Cliffe Leslie, translated in the *Bibl. dell' Economista*); the third edition was called *The Elements of Economics*, 1881-86, 2 vols. sm. 8vo. *Definition and Nature of the Science of Political Economy* was a paper read at Cambridge 1862. *Elements of Banking*, 1878, 7th ed. 1883, sm. 8vo. *Economics for Beginners*, 1878, 5th ed. 1899, sm. 8vo. *Lectures on Credit and Banking*, delivered at request of Institute of Bankers in Scotland, 1882. *On the Modern Science of Economics* was read before the Manchester Statistical Society 1887. *The Theory of Credit*, 1889-91, 2 vols. 8vo, 2nd ed. 1893-97, 2 vols. in 3, 8vo, reissued in one vol. 1898, 8vo. *Address to Civil Service Commissioners on the Teaching of Economics in the Civil Service*, 1892, folio. *Bimetallism*, 1894, 1st and 2nd ed. 8vo (enlargement of ch. vii. *of Theory of Credit*). *Gresham's Law* and *Bimetallism in France (1803-74)* were two pamphlets issued by the Gold Standard Defence Association, 1895. *History of Banking in Great Britain*, being vol. ii. of *History of Banking in all Nations*, 1896. *The History of Economics*, 1896, 8vo. *Credit*, paper read before National Liberal Club, 1897. *Indian Currency*, 1898, 8vo. *Draft Tentative Scheme for restoring a Gold Currency to India*, 1898, privately printed, folio. H. R. T.

MARTIIS, SALVATORE COGNETTI DE. See COGNETTI DE MARTIIS, Appendix.

MARTIN, JOHN BIDDULPH (1841-97). Educated at Harrow and Exeter College, Oxford, he entered the Banking House in Lombard Street with which his family have so long been connected, at an early age. Assiduous in his business duties even to the minutest detail—thus when his turn came round he was most careful to attend to the unlocking the safe of a morning at 9 A.M., as his father and uncles had done before him and as his partners did—he yet found time to work on many subjects of public interest connected with his profession. His paper on "Our Gold Coinage," 1882, an able statistical inquiry into its defective condition at the time, with extremely careful statements showing the depreciation of the coinage from 1817, the date when our gold coinage was resumed in its present form, followed as it was by another paper in 1883 on the same subject by the present writer, was of great service in promoting the recent reform of the gold currency. This paper appeared in the *Journal of the Bankers' Institute*, to which, as well as to the *Journal of the Royal Statistical Society*, he was a frequent and valued contributor. He was President of the last-named Society at the time of his death. His article on "The Evolution of our Banking System" in the *Economic Journal* for 1891 is a very able sketch of the growth of the business, written as it only could have been by a man who had an accurate knowledge both of the history of the past and of the practice of present times. To this Dictionary he contributed the article on RESPONDENTIA BONDS. When the Editor asked him to write this article, he felt there was hardly any other man in the City who could have undertaken it.

The most important work by John Biddulph Martin was "*The Grasshopper*" *in Lombard Street*,

the premises where the business of the firm is still carried on, the history of the Banking House which was at one time the property of Sir Thomas GRESHAM, whose crest, the Grasshopper, the name commemorates. The family of Martin has long been connected as Goldsmiths with the City. Sir Richard Martin was Lord Mayor of London in the Armada year, 1588-89, and again in 1593-94, and the name has long been conspicuous in the annals of Lombard Street. The volume is a most interesting record, both of families connected with the business of banking and of the rise and progress of the business itself.

MAZZOLA, UGO (1863-1899), was born at Naples and died at Courmayeur. The son of a merchant, he had been accustomed to see the application of economic laws ever since his childhood. He studied economics at Naples, under Professor Ciccone and from the works of Fr. FERRARA, taking his degree at an age at which most others are only beginning to prepare for it. Possessing most modern languages —including Dutch—and gifted with uncommon intelligence, the Government appointed him, at the age of twenty-two, to study the question of workmen's insurance by the State. For this object he went in 1884 to Berlin, where he had the privilege of attending the lectures of Professor A. Wagner. His first book, on *Insurance of Workmen*, was published by the Ministry of Agriculture, Industry, and Commerce, and was considered as exhaustive. He was early appointed to the chair of political economy in the small university of Camerino, teaching there public finance and statistics besides political economy. A convinced free-trader, he undertook to write the "Chronique" (history of current events) for the *Giornale degli Economisti*, which he had bought with a couple of friends. His chronicles were as witty and caustic as if BASTIAT had reappeared to write them, and naturally gained for him as many enemies as friends. Not content with writing chronicles, he would travel all over Italy delivering speeches. His scientific activity was principally roused by financial problems, viz. the alterations in economic equilibrium through governmental interference, in the shape of taxation and of public services substituted for private enterprise. A book on the *Fundamental Data of Public Finance* obtained for him the chair of finance at Pavia, where COSSA was teaching political economy. The sudden death of Mazzola's father obliged him to break off his scientific work for more than two years, in order to unravel the intricate affairs of a wholesale cloth importer. Disease began to undermine his health. When he returned to scientific work he wrote on German colonisation in the Polish provinces of Prussia. His book was republished by the Ministry of Agriculture, Industry, and Commerce as a guide for and to supply materials for those who are interested in internal colonisation in Italy (Sardinia and several regions of the south of Italy). His last book was on *Progressive Taxation*, in which he shows, by historical analysis, that theoretical principles have, as a matter of fact, always had very little to do with it in comparison with political forces which have decided its acceptance or rejection. Besides his books, Mazzola has left two excellent monographs, one on *Fiscal Monopolies*, and one on the *Land Tax*. Increasing ill-health put an end to his activity before he was thirty-six. He was considered the ablest of the younger Italian economists of his time. M. P.

MEAN, FREQUENTIAL (in Statistics). This form of average proposed by Fechner, and called by him *Dichtester Werth*, is determined by the frequency of occurrence. "If we arrange the data according to their value or quantity, and then divide this series into equal portions, a certain unevenness of distribution will be noticeable; if we then take the most crowded portion and from it its central item, we shall obtain a value which, in certain cases, may be used as the representative of the whole series, it being the one which actually occurs more frequently than any other" [see AVERAGE; MODE, in Statistics, Appendix].

[See Ernst G. F. Gryzanovski "On Collective Phenomena and the Scientific Value of Statistical Data," *Publications of the American Economic Association*, August 1906.]

MEDIAN. See AVERAGE, Appendix; INDEX NUMBERS, Vol. II. p. 386 *d*.

MENGER, DR. ANTON (1841-1906), was born at Maniow in Galicia and died at Rome, being the youngest of three brothers, all of them writers on social and economic questions, of whom the eldest, Maximilian, was a member of the Austrian Reichsrath, and the youngest, Carl, was one of the most celebrated champions of the deductive against the historical school. Anton was trained as a jurisconsult at Vienna University, and after obtaining the right of Private Lecturing in 1872, and becoming Professor Extraordinary in 1874, was in 1877 elected Professor of Civil Procedure, which post he held until he retired on a pension in 1899. His earliest publications apparently dealt solely with legal procedure, but he soon turned his mind to the treatment of social problems from their juristic aspect, and the publication in 1886 of his first and perhaps greatest economic work, *Das Recht auf den vollen Arbeitsertrag in geschichtlicher Darstellung*, marked the completion of the change. This work was translated into several languages, and in 1890, in "The Civil Law and the Non-propertied Classes," he criticised the proposed Bill for a code of civil law for the German Empire. His practical influence, indeed, was not confined to this measure, but is visible in the German Statute Book generally and in two Austrian Statutes, Civil Procedure, 1895, and Civil Executions,

1896. In 1895 he became Rector of Vienna University, and chose "The Social Problems of Jurisprudence" as the subject of his Rektoratsrede. On his retirement from the Chair of Civil Law in 1899 he became Honorary Professor of the Law of Civil Procedure and of the Philosophy of Law; and he has left some further works on social and ethical theory, and an unpublished manuscript on "Politics for the People." He died at Rome in February 1906.

The combination in Dr. Menger of legal training and legal methods with socialistic opinions and sympathies enabled him to give birth to a new type of juristic socialism. He never wholly ceased to be a jurisconsult, and as a result he subjects the projects of his party to a severe and impartial though sympathetic analysis. In the introduction to his chief work he declares "a juridical elaboration of socialism to be the most important task of modern jurisprudence, the right accomplishment of which will materially assist the peaceful reform of our social conditions," and he despaired of much practical achievement until "socialistic theories are laid down as bare legal conceptions denuded of the endless economic and socialistic literature which form their main contents." *Das Recht* was, indeed, intended by its author to be the "fragment" of a synthesis of socialism as a body of legal rules; but this work unfortunately was never completed. This aspect, however, was not so much that of the practical jurisconsult as based on the philosophy of law; for, as Professor Foxwell (*see below*) points out, it was not legal rules (*lex, loi, gesetz*) but ideal right (*jus, droit, recht*) with which Menger dealt. "To him jurisprudence was merely a reflection of traditional legal customs, but the new philosophy, the jurisprudence of the have nots, was in his opinion the real science of socialism"; and to the support of such a system all his published works have in some form or other been devoted.

The influence of this standard is most marked when we come to his economic method, which is as critical and analytic as the most precise could desire. *Das Recht*, his chief work, is partly abstract in character, but the remainder of it is historical. The former method is found in his analysis of the main socialistic doctrine of the Right to the whole produce of labour, and in tracing the development of this all defects of reasoning and insufficiency of research obtain short shrift. On the North German School he is particularly severe, describing their method as "subversive of all rules of historical research and resulting in a constantly increasing dead-weight of errors and misconceptions." An analysis of some of the chief socialistic doctrines leads him to the conclusion that they are mutually incompatible, and he adjudges the Right to Subsistence to be the more important claim to which therefore the Right to the Whole Product must give way. The rest of the book traces historically the origin of the latter theory from the earliest English and French socialists —GODWIN, HALL, THOMPSON, and the St. Simonians (see ST. SIMON)—whose originality he vindicates against the Northern German School and the pilfering of MARX and RODBERTUS, who borrowed the theory from them without acknowledgment. "To men," he wrote, "who bore in their lives besides other persecutions the grief of being unappreciated and forgotten, there is at least due the justice of immortality as the originators of world-moving thoughts."

Unlike his brother Carl, Anton Menger contributed little or nothing to the pure theory of economics; but his work gave him a place of his own as the founder of Juristic Socialism, in which he has had no prominent follower, and Jurisprudence itself has benefited by this connection with Socialism. The *Das Recht* itself, Professor Foxwell says, is "a most felicitous and vigorous study of the historical evolution of socialist doctrine. . . . Broad but sketched with singular accuracy of learning." "The pattern of a fearless thinker who shrinks from no consequences, of a warm-hearted advocate of the non-propertied classes," wrote Mr. Victor Graetz in the *Economic Journal*. His works were:—

Das Recht auf den vollen Arbeitsertrag in geschichtlicher Darstellung, 1886-1891; translated into English with introduction by Professor Foxwell, 1899.—*Gutachten zur Errichtung einer Eidgenössischen Hochschule für Rechts- und Staatswissenschaft*, 1889.—*Das Bürgerliche Recht und die Besitzlosen Volksklassen*, 1890.—*Die Sozialen Aufgaben der Rechtswissenschaft*, Rektoratsrede, 1895.—*Neue Staatslehre*, 1903.—*Neue Sittenlehre*, 1905.—*Volkspolitik* (in Manuscript); and two articles "Sozialismus und der Sozialpolitik in der Zukunft," 1887.—"Die Soziale Bewegung und Kulturwelt," 1899.

[See Professor Foxwell's Introduction to M. E. Tanner's Translation of *Das Recht*, London, 1899.—Luigi Cossa, *Introduction to the Study of Political Economy*, English Translation, 1893.—*Handwörterbuch der Staatswissenschaften* (Jena, 1900) for Biography by Josef Stammhammer, and *Economic Journal*, June 1906, for obituary notice by Victor Graetz.—*Jahrbuch für Nationalökonomie und Statistik*, 1888, by A. Adler; 1890, by E. Loening; and Gustav Schmoller in *Jahrbuch für Geschichte und Verwaltung*, 1889.] N. B. D.

MESSEDAGLIA, ANGELO (1820-1901), was born at Villafranca, Verona, and died in Rome. Three men have been the direct teachers of all Italian economists since the renewal of economic studies in Italy: COSSA, FERRARA, and Messedaglia. Each of them acted in his own special way. Cossa was incomparable in bibliographical knowledge and in systematising economic doctrines. Ferrara was an original thinker, a creator of new knowledge. Messedaglia was a statistician, a logician, a teacher of method. He was a slow worker, and would

keep a problem he was studying for years and years on his desk without being induced to utter an opinion.

His publications are not numerous, but each of them became in time a standard book of Italian economic literature. In 1850 he published a volume on public debts and the best methods of consolidation, *Dei prestiti pubblici e del miglior sistema di consolidazione*, Milan. In 1858 he began his demographic publications by *The Methods of the Theory of Population Considered* (*Della teoria della popolazione principalmente sotto l'aspetto del metodo*), Verona. They were continued in 1864 in an essay on GUERRY DE CHAMPNEUF, and in 1866-67 in *Studies on Population*, published like the last mentioned in the acts of the Venetian academy (*R. Istituto Veneto*). The general methods of statistical research were the subject of introductory lectures to his courses of lectures in 1872, 1874, 1877, published in the annals of the universities of Padua and Rome, and in the *Archivio di Statistica*. They were also the subject of monographs whose titles are: *Methods in Statistics*, 1879; *Criminal Statistics*, 1879; *Some Problems in Theoretical and in Italian Statistics*, 1880; *Calculus of Mean Values and their use in Statistics*, 1880; all published in the *Archivio di Statistica*. In 1881 he took up monetary problems and wrote one of the very best books Italian literature has on this argument, dividing it into two parts, *The History and Statistics of Precious Metals*, and *Money and Monetary Systems in General*. This publication also appeared in the *Archivio* for 1881, 1882, 1883. Messedaglia was for several years a deputy and was then appointed a senator. In this latter quality he reported on several economic subjects. One of his reports, on the reform of the land tax, has become a standard book on the *History and Methods of the Cadastre*, 1882.

Messedaglia's drift of mind would always lead him to a minute study of facts. In the question of land tax he would go into the most minute technical details of the *Cadastre* (see CADASTRAL SURVEY); in monetary problems he would go into technical details of banking, of mint methods, of industrial uses of metals, of customs and habits of hoarding, of practices in negotiating drafts, and did his best not to omit the action of the most minute influence. In public finance he would again take into consideration not only positive legislation, but also its working in real practice. He was a positivist by temperament. Concise in speaking and writing, slow and monotonous in oral lectures, he was attractive in that he never said a useless thing. He would never indulge in polemics, and it was impossible to make him lose his temper. He was highly respected by students and colleagues for his great breadth of knowledge, which never made a person who was speaking before him feel sure that he was not in the presence of a man who, though remaining silent, knew more about the argument than the speaker. M. P.

MEYER, HERMANN RUDOLPH (1839-1899), born at Friedeberg, described as a "social conservative" (*Konservativer Volkswirth*), assisted Hermann Wagener in journalistic work, sharing his views as well as those of RODBERTUS on economic questions. These led him into conflict with the Prussian Government and to his departure from Germany in 1877. For a time he lived in Austria, where, his sympathies drawing him to the conservative party, he lent his assistance to the reform of the law concerning factories and corporations of artisans. Being unable to reconcile his views on corn duties with those of the Austrian aristocracy, he left Vienna, and after further travel settled in Canada in 1881, became naturalised as a British subject, and engaged in farming. Ill-health compelling him to return to Vienna, he again became interested in Austrian politics on the conservative side, while his experience in farming enabled him to oppose agrarian protectionism.

His principal writings were *Der Emancipationskampf des vierten Standes*, 1872-74, 2 vols., 2nd ed. of vol. i., 1882, an impartial statement of Socialism.—*Capitalismus fin de siècle*, 1894.—*Hundert Jahre Conservativer Politik und Literatur*, 1896.

[See *Economic Journal*, vol. ix., London, 1899.—*Handwörterbuch der Staatswissenschaften*, giving complete list of works, vol. v., Jena, 1900.]

MIKLASHEVSKY, IVAN (1858-1901), Professor of Political Economy and Statistics at the University of Kharkoff, took a keen interest in the economic and social movements of his day. His principal work was a *History of Village Economy in the State of Moscow: the Formation and Management of the Villages in the Southern Frontier of Russia in the Seventeenth Century*. At the time of his death he was preparing further work in continuation of this. He contributed a brief but brilliant sketch of the history of economics in Russia to this Dictionary (see RUSSIAN SCHOOL).

MODE (in Statistics). If we consider a series of instances of a kind of quantity, that value of the quantity in whose neighbourhood the largest number of instances is found is termed the *mode* of the series. In other words, the mode, or, as it is also called, the maximum ordinate average, is the value in whose neighbourhood the instances cluster most densely. See AVERAGE.

MUNICIPAL AND GOVERNMENT TRADING. In my book on Municipal and Government Trading I have endeavoured to prove, and I see no reason to change my opinion,

1. That local expenditure is increasing more rapidly than rateable property.

2. That local indebtedness is increasing more rapidly than rateable property.

3. That municipal trading cannot fail to give rise to difficult labour problems, and may lead to serious corruption.

4. That profits are only made, if at all, when municipalities have a monopoly; they are con-

fined to businesses such as the manufacture of gas, which has long been established and reduced to regular rules; that even in such cases the accounts have been so kept as to make it impossible to determine what the real result has been; that the profit, if any, has been but small; and that much more satisfactory and remunerative results might have been obtained if the works had been leased to private companies or firms.

5. That municipal trading has seriously interfered with private enterprise and our foreign commerce.

6. That the State management of railways is open to similar objections; that on State railways the fares are higher, the trains slower, fewer, and less convenient, and that to introduce questions of railway management into the domain of politics is open to serious objections.

7. That it is unwise to give votes to those who pay no rates, and unjust to withhold them from those who do.

8. That Government and Municipal Trading, by reducing the demand for labour, while increasing prices and raising rates, has not only injured the ratepayers generally, but especially the working classes; and that if carried to its logical conclusion, it will involve the loss of their freedom.

That the burden of our rates is not only excessive but increasing, no one can deny; and they will inevitably continue to rise unless some change is made in our policy.

Sir J. W. Benn, though he has himself been one of the most able and active supporters of municipal trading and lavish expenditure, recently admitted in the debate on the Agricultural Rates Bill in the House of Commons that "the position of the London ratepayer has become critical. The increasing rates of London are driving away industries by the dozen," and what is true of London holds good also with reference to other great cities.

In spite of the prosperity of our commerce, the building trade is depressed, and no wonder. If it had not been for the increase in the rates many a man would have improved his house, many a railway company would have enlarged their stations, or in other ways have afforded more accommodation to the public, and thus given additional employment to labourers and artisans. We are told, no doubt, that municipalities make profits. But this is only the case where, as in gas works, they have a monopoly. Of course if you have a monopoly and can charge what you like, it is easy to make a so-called profit. They charge the ratepayer a high price and call it a profit.

All monopolies are bad, but Government and Municipal monopolies are the worst, because, when once established, they can neither be regulated, controlled, nor abolished.

By recklessly running the Thames steamers the County Council admit that they lost over £50,000.

The more this policy has been carried out the worse for the working man. West Ham is a case in point. The rates are very high, industry is driven away, there is too little employment, and the working man suffers in consequence.

The programme of Socialists is that "all the means and instruments of material production, distribution, and exchange should be owned and controlled by the State."[1] Socialists no doubt think that they are acting in the interest of the working classes. They are entitled to their opinion, and I make no reproach, though I do not agree with them.

Under their system not only railways, tramways, and gas works, not only manufactories and building concerns, but shops also,—milk shops, bakers, butchers, grocers, and the rest,—would be run by the County Council.

Perhaps it will be said that tramways and waterworks should be worked by the London County Council, but that shops would not be interfered with. But where are we to stop? Why tramways and not omnibuses or cabs? Why water and not bread or meat? Indeed, at a meeting of the Society of Arts, Mr. Burns was asked "Whether it was his view that all private property, what he called the instruments of production, should be in the hands of the State or the municipality?" Mr. Burns replied, "Yes."[2]

Moreover, it is surely evident that municipal employees should not elect their own employers. Town councillors will have to regulate the wages of their electors. The temptation to set the wages against the votes must increase till our municipal governors are placed in a difficult, if not an impossible position.

This policy is generally advocated as being in the interests of the working man. But those who are engaged in commerce know that success depends on close attention to details, on watching the turn of the market, on giving mind and thought to the business. It is impossible for the members of municipalities to do this, and, consequently, municipal management cannot be as economical or as successful as private management.

Sir H. Campbell Bannerman, Sir Edward Grey, and Lord Rosebery all agree that the London County Council is greatly overworked. The London County Council cannot look after the details as private firms and companies would; the services and products must therefore be more expensive. The national output will be less. Wages in the long-run are governed and determined by international competition. Municipal Councils could not raise their wages or they would ruin their markets. Moreover,

1 *The Times*, Oct. 6, 1906.

2 *Journal of the Society of Arts*, No. 2413, vol. xlvii. 269, 270.

as governments and municipalities would not increase their works, or adopt improvements so rapidly as private firms and companies, the demand for labour would be less. The difference could not then be thrown on private enterprise as it is now, because private enterprise by the hypothesis will have been done away with, or rather, will have been driven over-sea. With the same, therefore, or probably with lower wages, working men would have to pay a higher price for the necessaries of life.

"But this is not all. At present they are free. They can choose their employer and their employment. Under the new system this would not be possible. They could not choose their employer, for there would only be one. Nor could they choose their employment. If the State or the municipality is to be responsible for them, workmen would have to do as they are bid. At present, if they do not like their work or their employer, they can change. That would be impossible under the new system which they will have created for themselves. Socialists frankly admit this. For instance, the Fabian Society says—"Every one should have a legal right to an opportunity of earning his living in the society in which he has been born; but no one should or could have the right to ask that he shall be employed at the particular job which suits his peculiar taste and temperament. Each of us must be prepared to do the work which Society wants doing, or take the consequences of refusal." (Fabian Tract, No. 127, "Socialism and Labour Policy. Municipal and National Trading," p. 154.)

But who is to determine what "Society wants doing"? Some superior official. I shall be indeed surprised if British workmen are prepared to surrender their personal freedom and reduce themselves to the position of slaves! Bureaucracy is the worst form of tyranny.

The result to the working classes, then, would be less employment, lower wages, dearer necessaries of life, and—the direst misfortune of all—the loss to a great extent of the personal freedom they now enjoy.

As regards the conduct of commercial undertakings by Government, perhaps the best case to take is that of railways. It is extremely difficult to compare the work done in Government dockyards with that of private shipbuilding yards, though it would doubtless be wise to restrict the former within narrower limits. As regards railways, it is more easy to contrast the two systems.

Take, for instance, the case of India. Mr. Horace Bell, of the Railway Department of the Government of India, not long ago read an interesting paper before the Society of Arts. He said that he was at first very much in favour of the management of railways by the Government, but the result of his experience was to convince him that . . . "the only means of introducing a new and vigorous life into Indian railways is by inducing a free and unrestricted flow of private capital to India, and that this implies the gradual, but eventually complete, abandonment of State administration." (*Journ. Soc. of Arts*, No. 2371, vol. xlvi.)

In the course of the discussion Sir Juland Danvers, who represented the Government on the Boards of the Indian railways from their infancy, and speaks with perhaps unrivalled experience, expressed his opinion that . . . "the agency of companies was, upon the whole, the most satisfactory mode of carrying out railway enterprise. That seemed to be now the opinion of the Government. Railways, being commercial concerns, were better in the hands of those who could manage them on commercial principles, if the choice was between a State and a Company, the latter was, on the whole, most desirable."

The results, indeed, have been so unsatisfactory that the Government recently selected Mr. Thomas Robertson to make a Report on the Administration and working of the Indian railways. After an elaborate inquiry, he came to the conclusion that . . . "the working of the Indian railways cannot be regarded as at all satisfactory. But I attribute this more to the system than to any individual action on the part of the railway or Government officers. . . . But after long and anxious consideration, the conclusion forced on me is that root-and-branch reform alone will be productive of lasting good and that if the development of railways in India is not to be hampered, and if they are to render that full and efficient service to the country of which they are capable, they must be permitted to be worked more as commercial enterprises than they have in the past." (*Report on the Administration and Working of Indian Railways*, 1903.)

He points out that the average speed "is not as high as might have been expected"; that it "is so slow as seriously to interfere with the proper development of the traffic"; and that "before the rates and fares in India can be regarded, relatively, as equal to those in England, the former will require to be lower than the rates now charged—for passengers, by about 18 per cent to 40 per cent; for general merchandise, by about from 30 per cent to 60 per cent; and for coal, by about 40 per cent to 60 per cent." As to the result of Government interference in the construction of railways, we have an object lesson if we compare India with Argentina, where the construction and management of railways have been wisely left to private enterprise. The population of India is (1904) over 290,000,000, and the miles of railway 27,000, or one mile to every 11,600 people. In Argentina the population is mainly Spanish, and the country is agricultural. The Government has been in great financial troubles. Nevertheless, with a population of 4,500,000, they have over 12,000 miles of railway—mostly made with English capital,—or a mile to every 450 persons. If India had the same mileage of railways in proportion to population, she would have, not 25,000 miles of railway but 644,000 miles. Now why does English capital go to make railways in a foreign country, and not to India, a part of our Empire? Because, as the Government interfere, others are deterred from entering the field. They naturally say, if any line is proposed

by private enterprise, that, if it were likely to pay, the Government would make it. I cannot doubt that the policy of successive Governments in this respect has had a serious and unfortunate effect on the prosperity of India.

The present Lord Farrer,[1] in conclusion, tells us that after his careful comparison . . . "it certainly appears from our figures that those countries which have been given freest scope for private energy have obtained the fullest reward. It is frequently forgotten that in questions of administration, Government officers are only human beings after all, and do not differ in kind from other individuals, while the able and original-minded men among Government servants are certainly more hampered —by quite unnecessary red-tape regulations—in carrying out fresh ideas than are the servants of private enterprise. The danger of this criticism developing into complete control is the rock ahead, for as soon as Government obtains control, private enterprise will wither."

Mr. Acworth[2] concludes his enquiry as follows:— "A careful study of the evidence has convinced me that in the long-run State control ends in keeping down the best to the level of the worst, and that, taking them for all in all, the private railway companies of England and the United States have served the public better than the Government railways of the Continent or of our Australian Colonies, and—which is still more to the point—are likely to serve it better in the future." The late Lord Farrer said,[3] "The development of railway communication in Great Britain has been such as no Government management, however good, could possibly have produced."

No one, indeed, who looks dispassionately into the evidence can doubt that the State management of the railways has been a great misfortune for the Continent, and that our trade and commerce have benefited immensely by the energy and enterprise of our railway companies and their very able officials.

In cases where a monopoly is almost inevitable the "sliding scale system," adopted in London and several other places, is better for the ratepayers than that of municipal management.

Under this system a sliding scale of price and dividend has been adopted, under which, starting from a given point of price and dividend, the gas companies are enabled for every penny per thousand feet by which they reduce the price of gas to add a quarter per cent to their dividend, so as to divide any additional profit they may make between the companies and their consumers. As regards capital, gas companies coming to Parliament for power to raise money are required to put up to auction all the fresh capital they require, so that any premium upon the shares goes into the plant and stock of the company, and not into the pockets of the shareholders. This plan not only gives the consumer a share in increased profits, but also gives the companies a motive for economy.

[Lord Avebury, *On Municipal and National Trading*, London, 1906.—Hugo Robert Meyer, *Municipal Ownership in Great Britain*, New York, 1906.] A.

MUNRO, J. E. C. (1849-1896), born in County Down, was educated in Ireland at the Royal Belfast Academical Institution, and at Queen's College, Belfast, graduating as B.A. in 1871, and at Cambridge, where he studied law and economics, obtaining in 1874 the second place in the Law Tripos. After being called to the Bar and practising for a short time, he was appointed, in 1882, Professor of Law and Cobden Lecturer in Political Economy at Owens College, Manchester. He resigned these posts in 1892 and 1890 respectively, and returned to London to practise as a barrister. He was Reader in Roman Law to the Inns of Court for some years, and Examiner in Jurisprudence to the University of London, 1889-94.

Besides the numerous articles which he contributed to this Dictionary, he wrote various pamphlets and papers for the *Economic Journal*, the *Proceedings of the British Association for the Advancement of Science*, and the *Proceedings of the Manchester Statistical Society*, the papers on the "Sliding Scale in the Coal Industry," the "Sliding Scale in the Iron Industry," and the "Probable Effect of an Eight Hours' Day on the Production of Coal and the Wages of Miners," being some of the most important. He was a member of the Council of the British Economic Association and of the Royal Commission on Mines, President of the Manchester Statistical Society for one year, and worked for Section F (Economics) of the British Association.

[See *Economic Journal*, vol. vi., London, 1896.]

NAZZANI, EMILIO (1832-1904), was born in Pavia, and was a scholar and friend of Professor L. COSSA. He is known as the author of a clear and concise text-book—*Sunto di Economia politica*—which has passed through ten editions, being used in the classes of nearly all the technical institutes—schools corresponding to the German *Realschulen*. Nazzani was himself president of the technical Institute of Forli, and refused, being exceedingly modest, to quit this position for the chair of political economy of the University of Pisa. His manual is entirely on the lines of classical English political economy. So are also his four essays: on rent, on the wages fund, on profit, and on the classical school of political economy. These essays were collected in one volume in 1881, Milan, and were written between 1872 and 1880. The first edition of his text-book appeared in Milan, 1875, and the last in Forli in 1905, after his death, under the direction of Professor Loria. M. P.

[1] Foxwell and Farrer, *Express Trains.*
[2] *The Railways and the Traders.*
[3] Farrer and Giffen, *The State in its Relation to Trade.*

OCTROI. In France a law of the 29th December 1897 allows municipalities to suppress all *octroi duties*, and even compels them to do so with regard to wines. It is, in fact, especially to benefit the sale of wine that the law making the alteration in the duties has been passed.

The receipts from the octroi have been as follows in 1897, before the law was enacted, and 1905, the latest figures to hand, converting the franc as 25 = £1:—

	1897.	1905.
Octrois of the Departments	£6,855,883	£6,726,471
City of Paris . . .	6,270,754	4,338,377
District of Paris . .	126,338	122,713
	£13,252,975	£11,187,561

The principal effect appears to have occurred in Paris, and in the consumption of spirits on which higher duties have been laid.

Quantities of Alcohol taxed under the General Duty.

	1897. Gallons.	1901. Gallons.	Diminution. Gallons.	Proportion Per Cent.
Towns imposing octroi duties[1] .	18,610,834	14,331,746	4,279,088	22·98
Other places .	17,336,462	15,294,224	2,042,238	11·78
Total .	35,947,296	29,625,970	6,321,326	..

The number of gallons on which duty is paid decreased actually about 46 per cent, principally owing to the raising of the communal tax.

It may be seen from this how dangerous it would be for the finances of the State to leave it in the power of the communes for the future to establish, for their own profit, unduly high duties on alcohol.

A very small number of municipalities have made use of this power to abolish their octroi duties. Out of 1514 in 1895 which have such duties, only nine suppressed them (leaving therefore 1505), and among them were only two towns of importance: Lyons (500,000 inhabitants); Dijon (60,000); the others are only very small communes.

Still, it cannot be said that they have entirely abolished the *octroi*, for they have retained the tax on spirits, and increased it to replace the abolished duty on wines.

The economic results of this reform in the towns which have carried it out are not easy to analyse; they are, in all cases, very indecisive. The consumer does not appear to have derived as great an advantage as might have been expected through the diminution of the price of the goods consumed. It is mainly the middlemen who have profited by it. On the other hand, the owners of houses in towns have greatly suffered, for, as a general rule, the octroi duties have been compensated for by raising the taxes on houses.

A small commune near Argenteuil had suppressed the octroi duties in 1900, but it answered so badly that it re-established them the following year, except in the case of wine.

The law of 1897 indicates the taxes by which municipalities can make up for the octroi duties (additional centimes on direct taxes, duties on alcohol, licences on the vendors of alcoholic drinks, etc.). They may, nevertheless, establish any other taxes they wish, but on condition of obtaining the consent of the central government.

OPIUM, AS A STATE MONOPOLY. Recent political developments have profoundly modified the position of the opium question, and its history during the last few years promises to be of the deepest interest to all economists.

Our article on the subject in vol. iii. p. 36 was approximately synchronous with the appearance of the exhaustive *Report* of the Royal Commission on opium that had been appointed by Mr. Gladstone's Government in 1893, with Lord Brassey as its president; and also with the publication of the second edition of Sir John Strachey's important work on Indian administration.

The position of the question at that time, 1895, and for some years after, was largely dominated by the very definite conclusions arrived at and set forth in these two authoritative documents. Those of the Royal Commission may be thus summarised:—

With regard to the export trade to China, the Commission held that it would be for that country to take action if it wished the existing treaties annulled on the ground that the import of opium is injurious to its population. Opium is now largely manufactured in China, and if the Indian supply ceased the deficiency would be soon filled by an increase in the home production. It may be added that so far from having encouraged the production of opium in India, as is often alleged, the British authorities found it produced wherever this could profitably be done; and that their whole policy has been to restrict the production to authorised areas.

And with regard to the restriction both on production and on home consumption vigorously imposed by the Indian Government, Sir John Strachey, with a wider knowledge of the whole subject than perhaps any other living person, wrote as follows:—

[1] *Bulletin de Statistique et de législation comparée* (Janvier à Juin, 1903), p. 667.

There is little doubt that more opium was consumed in India under native rule 150 years ago than now, and the stringent system of excise established by our Government has so greatly increased the price of the drug that consumption is reduced to a minimum. The danger is that this policy may be carried too far, and that by making opium too dear and too difficult to obtain, we may not only encourage smuggling, but may cause people who have been content with the moderate and beneficial use of opium to have recourse to alcohol, or to cheaper or more noxious stimulants, the consumption of which no government can prevent.

And as regards these restrictions on internal consumption, the Commission were of opinion that the evil effects ascribed to the drug have been much exaggerated. They summarised the preponderant medical evidence in saying that "the temperate use of opium in India should be viewed in the same light as the temperate use of alcohol in England. Opium is harmful, harmless, or even beneficial, according to the measure and discretion with which it is used." They did not advise prohibition; they recommended the maintenance of the Bengal monopoly system of production; and they found that the arrangements for retail vend were in general sufficiently restrictive.

Further, the Commission reported that it would be unjust, impolitic, and oppressive for the Government of India to interfere seriously with the production and sale of opium in the Native States; and also, that Indians of all classes were unanimous in holding that it would be unfair to impose taxation on them for the purpose of making good the revenue that would be lost by prohibition or further restriction.

The Report of the Commission, which thus gave the *quietus* to the more extreme forms of the agitation against the "opium traffic," was unanimous, with the sole exception of Mr. H. J. Wilson, M.P., who, with Mr. Arthur Pease, had been appointed to represent the views of the Anti-Opium Society. Mr. Wilson presented a minority report, traversing the conclusions of his colleagues, and complaining of the one-sided character of much of the evidence. The *personnel* of the Commission was remarkably strong and representative. The late Maharaja of Darbhanga and Mr. Haridas Veharidas represented Indian public opinion very admirably; and their strongly expressed opinion, both as to the impolicy of interference with the opium policy of Native States, and as to the facts that (1) prohibition or restriction of the opium trade with China would "mean sacrifice of a large revenue, fresh taxation, and probably great discontent," and (2) that opium in India "is largely used as a harmless stimulant, and people should not in such case be deprived of its use," has naturally carried great weight throughout the civilised world.

Sir William Roberts, M.D., F.R.S., represented the highest medical science with absolute impartiality; while Mr. Arthur Pease and Sir Robert Mowbray represented the religious objections to even the slightest State encouragement of vice, and the same might be said of Sir James B. Lyall, G.C.I.E., K.C.S.I., and Mr. Arthur Fanshawe, two Indian civil servants of the highest experience and authority.

The situation, as left by the Report of this great Commission, was this:—

It was held to be authoritatively established—

1. That the agitation against the opium trade had been largely built on the uninstructed philanthropy of well-meaning stay-at-home Englishmen. Sir John Strachey applied to the zealots of the anti-opium crusade the words of Condorcet, "*l'enthousiaste ignorant est la plus terrible des bêtes féroces.*"

2. That opium is one of the most valuable products of India. Its cultivation and manufacture afford lucrative employment to millions in British India and in the Native States. In many of the latter it forms an important element in the revenue of the chiefs; while in the poppy-growing districts of British India it is not only the support of the cultivators, but largely affects the revenue paid to Government by the landowners.

3. That while the direct revenue from opium, derived mainly from the China trade and paid by the Chinese consumers, and also from the restrictive duties on the comparatively small home-consumption, is one of the most important items in the Indian revenue, its loss would be almost insignificant when compared with the enormous economic loss that would be entailed on the country at large by the destruction of one of its most valuable assets. Sir John Strachey computed that this loss would not be covered by a payment of £100,000,000.

4. That even if ethical or other reasons should ever induce the Imperial parliament to use the despotic power of the Government to force this loss on the Indian peoples, it would be morally and politically impossible to compel the Native States to submit to a similar loss.

5. That consequently compensation, whether from British or Indian taxation, is practically out of the question. The fresh taxation needed even for the comparatively small matter of replacing the direct revenue would be certain to cause serious discontent, while full compensation would be beyond the power of the Indian Government. And, as Lord Kimberley had pointed out when Secretary of State for India, no serious politician had ever proposed that the taxpayers of England should furnish the enormous sums required. And Mr. Morley, in the same capacity, when the proposition was made in the House of Commons in 1907, that, we ought to put "Righteousness before Revenue," pointed out that we hardly ought to satisfy our

own righteousness at the cost of other people's revenue, but that there was practically no hope of a British Chancellor of the Exchequer ever consenting to increase British taxation to replace the Indian opium revenue.

6. That the Chinese had never formulated any settled policy in regard to the production and import of opium; that their occasional objections to the import of the Indian drug had been due simply to the suspicion with which they regarded all import-trade except as an excuse for taxation; and that they had refused to prohibit the import, not on account of coercion, but because of the loss of the import-duties it would have entailed.

While these conclusions, based on the report of the Opium Commission, have been very generally accepted in the United Kingdom, there has always been, and still is, a considerable number of people who dislike the idea of the British Government of India appearing as the monopolist manufacturer of an intoxicant, and who look with suspicion on the proofs offered that the monopoly is the best method of restriction, and that our commercial treaties with China are for the general maintenance of the "open door," and not for the special maintenance of the opium traffic. The general election of 1906 resulted in the return to Parliament of a majority holding these views, and the result has been a great advance in the direction of suppressing the trade with China, though no suggestions have as yet been offered as to how the loss of Indian revenue is to be made up otherwise than from the Indian taxation, nor as to the means by which the restrictions on the internal production and consumption of opium in India are to be maintained.

The existing situation (September 1907) must therefore be regarded as a transitional one, dominated by the following conditions:—

1. The Secretary of State for India, in his Budget speech for 1906, intimated to the Chinese Government his willingness to co-operate with China in measures for the reduction and ultimate extinction of the import into China of Indian opium, *pari passu* with the reduction and ultimate suppression of the production and consumption of the drug in China.

2. Negotiations ensued between the British Government, the Government of India, and the Chinese Government. The interest of China in the maintenance of the import of Indian opium had presumably been weakened by the results of the intervention of the Powers (Great Britain, France, Germany, the United States, Holland, and Japan), after the "Boxer" troubles—for the settlement of 1901 imposed on China the enormous indemnity of 450,000,000 Haikwan taels (approximately £67,500,000) payable, in half-yearly instalments up to the year 1940, mainly out of the revenues of the Imperial Maritime customs.

3. In September 1906 the Chinese Government issued an Imperial edict, decreeing the gradual abolition of the cultivation of the poppy and the non-medicinal consumption of opium, within ten years from that date. Since then a number of "opium dens" have been officially closed in Foo-chow and Canton.

4. In Calcutta, in the Budget statement, March 1907, the Finance Minister made an important statement on the subject of the then pending negotiations with China, practically abandoning the attitude towards this question formerly taken up by the Government of India. The Hon. Mr. Baker, after stating that the object in view was "the eventual extinction of the opium habit among the Chinese," mentioning that this would involve the loss to India of a revenue of 5½ crores per annum (£3,666,666), and detailing the steps already taken in this direction, took the following somewhat inscrutable view of the outlook:—

If our revenues continue to expand as they have recently done, and if no unforeseen mischance should befall us, we may hope that the void will be made good without imposing on Indian taxpayers a burden greater than they can bear. I am far from suggesting that the loss of revenue is the sole outcome of the Chinese proposals that concerns India. The economic loss to the country occasioned by the proscription of a valuable crop and an important industry; the contraction of our exports by the exclusion of a staple valued at over 9 crores (£6,000,000) a year, and its effect on our balance; and the loss inflicted on the people and Durbars of the poppy-growing States in Malwa—all these are considerations which deserve the most anxious attention. The point which I wish to emphasise at present is that there is no need for despondency, and that, if all goes well, there is nothing worse to fear than the absorption for a few years of the means of affording further relief to the tax-payer, and of incurring useful expenditure for the development of the country.

It is difficult to find in this statement an intelligible ground for any other feeling than one of despondency, except the fact that the closing of the *mints*—itself a tax on exports—will perhaps enable the Government of India to meet the loss of opium revenue by no more directly unpopular means than those indicated in Mr. Baker's last words.

5. In July 1907, the Secretary of State for India was able to announce, as the result of the negotiations, that, after consulting the Government of India—

His Majesty's Government have informed the Chinese Government that they accept in principle the proposal that the import of Indian opium into China shall be diminished by one-tenth annually, *pari passu* with an equal decrease in the production of the native drug, up to the year 1916, and they will continue to reduce at the same rate the export in 1911 and subsequent years, on proof that China has carried out its share of the arrangement; and that steps have been taken to reduce the area under

poppy in Bengal, which in the five years preceding 1906-7 averaged 615,000 acres, and in 1907-8 is not to exceed 562,000 acres. In 1907 the number of chests of Bengal opium fixed for sale was originally 4400 a month. This has now been reduced to 4000 a month, while for 1908 it has been fixed at 3900 a month. Further reductions will be made in succeeding years if the proposed arrangement with the Chinese Government becomes operative.

6. On July 25, 1907, it was announced in Peking that the Chinese Government had, on July 24, formerly assented to a proposal of the United States, that China should co-operate with the six powers—the United States, Great Britain, France, Germany, Holland, and Japan—in an inquiry into the whole question of the opium trade and production. But this assent was given on the express condition that no foreign commissions were contemplated "with a view to inspecting in the interior of China what steps had been taken to enforce the decree abolishing within ten years the cultivation of the poppy." This was in the nature of a reply to the statement of the Secretary of State for India, quoted above, that His Majesty's Government would require "proof that China has carried out its share of the arrangement." What sort of proof will be required has not been stated; but the Chinese Government here state that they will not permit a foreign inquiry in the interior of China.

7. All the above considerations only affect the comparatively small portion of this question involved in the opium trade between India and China, the production of the "provision" opium for this purpose, and the 5½ crores of Indian revenue dependent thereon. But this has hitherto been the pivot of the general opium policy of the Government of India. If the arrangement with China now tentatively entered upon by the British Government be carried out, the loss of revenue incurred, and the production of Indian opium greatly curtailed or prohibited, the Government of India will find itself face to face—as Mr. Baker foreshadowed in March 1907—not merely with the question of providing for the lost revenue, but with the far more serious and thorny economic problems connected with the cultivation of the poppy both in British India and in the Native States, with the rights of the native cultivators and landowners, and of the feudatory princes, and above all, with the costly and unpopular preventive measures that will be required to coerce the vast populations, who will resent what they will regard as hypocritical tyranny. No attempt seems to have been made as yet to deal with these almost insoluble problems—possibly owing to the extreme probability, frankly pointed out by the Indian Finance Minister,[1] that the arrangement with China will break down. For it must not be forgotten that the British Government has made it a condition precedent, that the Chinese Government—a far less powerful Government in regard to its internal authority than that of India—shall first of all face these economic difficulties and these home difficulties, and overcome them, before the Indian Government can be called on to do so. How insuperable those difficulties are likely to be, alike for India and for China, has been forcibly pointed out by Mr. Batten, one of the most experienced of Indian civil servants, who remarks that whatever our Government may attempt they will never persuade the Chinese to "abandon the ever-increasing culture of the poppy."

[Sir John Strachey, G.C.S.I., *India: its Administration and Progress*, 1903.—*Indian Financial Statement for* 1907-8.—*Final Report of the Royal Commission on Opium*, 1895.—*Correspondence relating to the Affairs of China. Presented to both Houses of Parliament*, 1902.—*Returns, East India (Opium), 20th March* 1902 [120], *and 27th November* 1902 [383]; also *Burma (Opium), 12th November* 1906 [349] *and* [348].—*Annual Reports of the Bengal Opium Department, and of the Bombay Opium Department.*—*China, Diplomatic and Consular Reports (Foreign Trade of China)*, 1902, 1903, 1904-5.—*Imperial Gazetteer of India, The Indian Empire*, vol. iv. pp. 242-247.] R. Le.

PARTNERSHIP: Limited Partnerships Act, 1907 (7 Edw. VII. c. 24). This Act will come into force on Jan. 1, 1908. By the institution of what it terms "limited partnerships," it enables bodies corporate or individuals to join unincorporated combinations without incurring unlimited liability.

A limited partnership must not exceed in number of members the limit imposed by the Companies Acts, namely, ten in a banking partnership, twenty in any other partnership, but the individual members of a corporate body which becomes a limited partner are, of course, not reckoned. A limited partnership must consist of one or more persons called general partners, who are liable for all debts and obligations of the firm, and one or more persons called limited partners, who, at the time of entering into such partnership, contribute either money or property valued at a stated amount, and who are not to be liable for the debts or obligations of the firm beyond the amount so contributed. A limited partner must not, during the continuance of the partnership, directly or indirectly draw out or receive back any part of his contribution; if he does so, he is liable for the debts

[1] The Hon. Mr. Baker, on March 20, 1907, in his Budget statement, said:—"What the eventual outcome will be it is impossible to foresee, for the practical difficulties of the task which China has imposed on herself are enormous, and may prove insuperable."

and obligations of the firm up to the amount so withdrawn. It is not clear whether this means in addition to his original liability, or only that the withdrawal shall not diminish that liability. The Act clearly contemplates and refers to the possible increase by a limited partner of his original contribution, but, so far as its wording goes, it confines the liability to the amount contributed at the date of entering the partnership. The liability should, logically, be co-extensive with the limited partner's interest in the business. A limited partnership must be registered as such with the registrar of Joint Stock Companies, particulars being given of the firm name, the general nature and principal place of business, full name of each of the partners, a statement that the partnership is limited, with a description of every limited partner as such, and a statement of the sum contributed by each such partner, and whether paid in cash or how otherwise. In default of such registration the partnership is to be deemed a general one, and every limited partner a general partner with consequent full liability. Changes in the constitution or business of the firm, or the sum contributed by any limited partner, must be notified to the registrar. The registrar is to keep a register and index of all limited partnerships registered, with particulars such as above mentioned, which is to be open to the inspection of the public. No limited partner can take part in the management of the business under penalty of being held liable for all debts and obligations incurred during the period he does so, nor has a limited partner power to bind the firm. A general partner may become a limited partner, and *vice versa*, such change being notified to the registrar, and, in the former case, advertised in the *Gazette*. In the absence of agreement to the contrary, a limited partner may, with the consent of the general partners, assign his share in the partnership business, whereupon the assignee becomes limited partner in his stead with the rights and, presumably, the liabilities of his assignor. The Act equally applies to the reconstruction of existing partnerships and the formation of new ones. J. R. P.

PATENT. The English law as to patents has been consolidated in the Patents Act, 1907, which re-enacts the old law with some modifications. The examination by the patent authorities prior to the grant of a patent is no longer confined to the correctness of the description of the patent and the completeness of the specification. An investigation (limited to complete specifications published within the previous fifty years) is now made for the purpose of ascertaining the novelty of the invention. If the invention has in whole or in part been covered by a previous complete specification, the applicant may still obtain his patent, but there will be inserted in the specification as published a reference to such prior specifications as the comptroller thinks right by way of notice to the public. In a clear case, where the invention has been wholly and specifically claimed by a prior specification, the comptroller may refuse to grant the patent altogether. In no case is the novelty of the patent in any way guaranteed (section 7).

Duration of Patent.—Any application for the extension of a patent must now be made to the High Court (section 18).

Provisions for ensuring Working of Invention.—The grant of a patent may now be revoked altogether, if the reasonable requirements of the public are not satisfied, or if the patent is worked exclusively or mainly outside the United Kingdom (sections 24 and 27). A. A. U.

PAUPERISM. See articles in Appendix on Poor Law, Unemployed, and Pensions, Old-Age.

PEDREGAL, Manuel (died 1896), a Spanish official occupying important administrative posts, was a strong adherent of the principle of Laissez Faire. For the vigour of his style he has been compared to Léon Say.

His most important works are: *Nociones de Hacienda pública.—Derecho, libertad Estado.—Instituciones de Crédito.—Sociedades Co-operativas.—Florez Estrada.*

PENSIONS, OLD-AGE. Old-age pension schemes may be classified into—

I. State-provided pensions
  (*a*) For all who have passed a certain age.
  (*b*) For the deserving poor who are unable to support themselves.
II. Pensions to subsidise private thrift which is
  (*a*) Voluntarily undertaken, or
  (*b*) Enforced by the State.

Each type of pension may be adequate or inadequate alone. Universal State-provided pensions must almost inevitably be inadequate because of their great cost. The old-age and infirmity pensions paid in Germany (instituted in 1889) are of the type II. (*b*). Certain classes of persons, which, generally speaking, include all wage-earners and the lower salaried officials, must insure. Half the premium is paid by employers, and the pensions are subsidised by the State. Pensions and premiums vary with the wage. Several bills for the institution of old-age pensions on the German plan have been introduced in France, but no measure has yet been adopted. Pensions are, however, provided on very favourable terms by the Caisse Nationale des Retraites pour la Vieillesse (established in 1085), which enjoys State subsidies, and for seamen and miners compulsory schemes already exist. The pensions paid in Denmark are of the class I. (*b*), and their cost is relatively low. Old-age pensions were introduced into New Zealand in 1898, and into

New South Wales and Victoria in 1901. The following table shows costs in the year 1904.

	Persons 65 years and over (in thousands).	Thousands of persons receiving pensions.	Percentage of pensioners to those over 65.	Annual amount payable (in £1000's).
Victoria . . .	67·5	11·4	17	198
New South Wales .	52·2	20·9	40	498
New Zealand . .	37·5	11·9	32	201

The Victorian scheme is much the cheapest. The cause is mainly that careful investigation is made before pensions are paid. In none of the colonies are pensions paid when need cannot be shown, and eligibility in all begins at 65. In 1904 maximum weekly pensions were 8s. in Victoria, 10s. in New South Wales, and (approximately) 7s. in New Zealand. All the schemes since their inception have undergone important modifications. Power is given to the Federal Parliament of Australia to institute pensions, and a Royal Commission appointed to consider the matter in 1905 has recently recommended a plan.

In the United Kingdom an agitation for the foundation of old-age pensions has gone on for many years, and the present Government (1908) has fulfilled their promise to introduce a scheme. A Royal Commission (appointed in 1893) sat for two years, and was followed by Lord Rothschild's Committee of Experts which examined one hundred schemes and sat also for two years. The findings in both cases were unfavourable. A few months after Lord Rothschild's Committee had completed its work Mr. Chaplin's Committee was appointed, and this after a three months' sitting recommended pensions for the needy who were aged and deserving. It was estimated by the treasury that the cost would be £10,300,000. More popular support, however, is accorded to Mr. Charles Booth's proposal, which, as revised, is that pensions of 7s. weekly should be paid to all men over seventy, and pensions of 5s. weekly to all women over seventy. It would cost about £13,000,000. It avoids the difficulty of settling 'desert,' and also the objection to schemes which subsidise definite forms of thrift which are tangible, that many wise sorts of expenditure, such as large outlay on children's education and the use of savings to start business, would be discouraged. The great defect of contributory schemes on a compulsory basis (type II. (*b*), the German plan) is the difficulty of collecting small contributions, and obvious disadvantage attaches to any rigid age-limit. The latter flaw is to some extent surmounted by the discounting of the pension expectation at an earlier age, which is allowed in Mr. Booth's scheme. Advocates of pensions hope that thrift will thereby be encouraged, and certainly the German scheme with its very inadequate pensions will be of very doubtful value if it is not. Several inquiries made in Germany leave it still uncertain whether any effect upon the disposition to save is being wrought or not.

Authorities. — Official publication containing statistics and estimates relating to different schemes, 1907; reports of Commissions mentioned above; a collection of essays published for the Charity Organisation Society entitled *Old-Age Pensions* (1903); on Denmark, a pamphlet (reprinted from the *Yale Review*) by Professor Flux, and a little work by Miss Sellers; on Germany, Lass and Zahn's semi-official publication on Workmen's Insurance, and some recent articles (1904 and 1905) in the *Yale Review* by Professors Pinkus and Farnam, and two reports (1895 and 1901) published by the Verein für Armenpflege und Wohlthätigkeit; on the Australasian Colonies, Reeves' *State Experiments, etc.*, and official publications. [See PENSIONS; STATE-AIDED PENSIONS; THRIFT.] S. J. C.

POOR LAW, ADMINISTRATION OF. The work of the officials, described in the article under this heading in Volume II. (*q.v.*), is now supplemented by that of the Distress Committees instituted by the Act of 1904 (see UNEMPLOYED). Old-age pension proposals and experiments are dealt with in an article headed PENSIONS, OLD-AGE. A Royal Commission upon Poor Relief is now sitting.

POPULATION, THE SLACKENING INCREASE OF. Since the publication of the third volume of the Dictionary (1899), the slackening increase among European nations has become more evident. For the United Kingdom, the annual reports of the Registrars-General (to say nothing of the census of 1901) tell of fewer marriages, fewer births, and fewer deaths. The death-rate of England in the first five years after the census of 1901 has declined more than the birth-rate, and the result is a natural increase of 12·10 per thousand as against 11·58 in the preceding five years (*Reports (England) for 1905*, p. xxxvii.). In the 35 years ending with 1905 the marriage-rate, measured "crudely" by the total population, has declined 8 per cent, measured more accurately by the marriageable part of the population (between the ages of 15 and 45) it has declined 19 per cent, though some allowance must be made for increased accuracy in the record of age (*ib.* vii. *cf.* vi.).

The birth-rate, measured "crudely," has fallen nearly 23 per cent in the 35 years; measured by the female population of ages from 15 to 45, it has fallen 29 per cent (*ib.* xxi.). Taken by themselves, illegitimate births declined nearly 52 per cent, and legitimate nearly 24 (*ib.* xxi.). The decline in the birth-rate is explained in some small part by the decline

in illegitimacy, in larger part by the lessened proportion of the married to the unmarried (of the marriageable ages); but there remains a much greater part, not much less than three-fourths, set down by the Registrar-General to deliberate limitation of families (*ib.* xxiii.).

The death-rate, measured "crudely," was 2 per thousand below the mean rate of the previous 10 years. By taking a certain distribution of males and females, and a certain distribution of ages as typical, we get a corrected rate, a standard for interpreting the death-rate as between district and district in England itself (*ib.* xxxviii., xxxix.). When we compare England with foreign countries we have not the help of a corrected rate. The comparison of the crude rates will show that in a list of 32 countries England stands 11th for her average annual marriage-rate in the 10 years ending 1904, showing 15·8 per thousand persons living, Germany (8th) showing 16·4, and France (16th) 15·2. In the matter of births, England has the 20th place with 29 per thousand, Germany (10th) having 35·5, and France (32nd) 21·7. As regards death-rate, England comes 21st with 17·2 per thousand, Germany 12th with 20·8, France 15th with 20·4, New Zealand lowest with 9·8. The last entry shows the need of a corrected rate. The crude death-rate in an old country is not comparable with the crude death-rate in a colony where the distribution of sex and age is entirely different.

The balance is still in favour of natural increase in all countries except France, where the decrease is masked by the effects of immigration. There are over a million of foreigners in France, the Belgians coming in from the north, and the Italians from the south. Perhaps the worst feature of France is the high rate of infant mortality. Otherwise a low death-rate might be expected to go with a low birth-rate. When reference is made to the "interdependence" of death-rate and birth-rate, the phrase may have one of two senses: (1) the simple statement of the arithmetical fact that when the births exceed the deaths there is, *ceteris paribus*, an increase of population; (2) the statement that the births are the cause of the deaths, either the infants being worse fed and tended in proportion to their numbers, or the deaths the cause of the births, the deaths leaving a gap, and which may mean more room and food. The last is not the best kind of interdependence. There is greater economy in a moderate birth-rate together with a low death-rate than in a greater birth-rate with a high infant mortality. Very few will argue that the greater the number competing for life the greater the chances of the surviving fittest being the very best.

Our emigrants in 1905 exceeded our immigrants by about 57,000 (*Stat. Abstr.*, *ib.* 351). Spain and Italy and Austria-Hungary are now ahead of us, not only in the number of emigrants, but in their proportion to the whole population (*Stat. Abstr.*, *Foreign Countries*, 1903-4, pp. 24, 25). A French observer has connected this fact with the decline in the English birth-rate, and drawn the conclusion that the Anglo-Saxon race is not now the strongest rival of the Far Eastern peoples for the honour of replenishing the earth. But the first duty of a nation is to be strong within its own borders, and with that in view to reduce its death-rate and lessen its sickness even at the expense of the birth-rate.

"Marriage and Birth Rates in England," discussion by Mr. G. Udny Yule, Dr. Newsholme, and Dr. Stevenson, in *Statistical Journal*, March 1906, pp. 34 to 147.—Discussion in *Times*, Oct. 1906, on the "Decline of the Birth-Rate," raised by Mr. Sidney Webb. See especially Prof. Karl Pearson's letters of 23rd Oct. and 1st Nov.—Dr. W. Schallmeyer, *Vererbung und Auslese* (Fischer, Jena, 1903).—Prof. René Gonnard, *Émigration Européenne du 19ème siècle* (Arm. Colin, 1906).

J. B.

POST OFFICE, THE (since 1898). Until Ralph Allen gradually established his cross-country posts between the six great post-roads in the first half of the 18th century, letters for all places off these roads reached their destination only by local conveyances, and there was no delivery even in the chief post towns. In London Dockwra's Penny post had been continued since 1680, but it was not till 1764 that Penny posts were authorised for other large towns. From 1801 a few outlying places had posts under guarantees, and some Penny posts worked within a limit of 10 miles from post towns. In 1840, on the introduction of the Penny post, an effort was made to extend the posts and deliveries. In 1843 the rule was adopted of giving a "Receiving Office" and a free delivery at all places receiving more than a hundred letters a week. In 1850 the rule was adopted that a post and delivery should be established wherever it would pay its way, reckoning the revenue at ½d. for each letter. This rule with favourable modifications in detail continued until, in 1897, on the Queen's Jubilee day, it was decided to give a delivery at least once a week to every house in the United Kingdom. In 1906 a delivery at least three times a week was promised, "save in very exceptional cases." Under this rule the delivery of letters has become more general and frequent than in any other country.

In 1864 the free redirection of letters was allowed within the same "free delivery" area. In 1874 the Postal Union Convention allowed free redirection from one country to another, but it was not till 1892 that free redirection was allowed for letters throughout the United Kingdom. In 1896 the rule was extended to all postal articles except parcels.

From 1890 to 1897 the average annual number of letters was about 1,796,000,000. From 1897 to 1902 the average number 2,244,200,000. From 1902 to 1906 it was 2,627,200,000, and in 1906-7 2,804,400,000. The rate of increase grows each year. The annual number of post-cards increases more slowly, and in 1906-7 was 831,400,000. The corresponding numbers of other articles sent by post was in the same year: circulars, 933,200,000; newspapers, 189,100,000; parcels, 104,820,000.

In 1906 the rules of the Book post were modified and admit nearly all commercial documents besides circulars. A cheap rate was also introduced for papers and books impressed for the use of the blind. From 2 ozs. to 2 lbs. the rate is 1d., from 2 lbs. to 5 lbs. 1½d., and from 5 lbs. to 6 lbs. 2½d. A cheap rate of 1d. per pound has been arranged for newspapers and magazines sent to Canada.

In 1906-7, 2,575,891 parcels were exported by post, of the value of £4,638,917. The number imported was 1,471,785, of the value of £1,535,661. The Parcel post has therefore become an important channel of foreign trade.

An arrangement has been made in 1907 for the issue of stamps which can be used for replies to letters sent abroad, and also as a cheap means of remitting small sums to foreign countries. These reply coupons will cost 3d. each in England, and will be accepted abroad as the equivalent of 25 centimes.

Letters with insufficient or no addresses form an increasing proportion of the articles posted. In 1906-7 nearly 30 million letters, etc., were undelivered for this reason, and these included 353,000 registered letters, containing £17,000 in cash and £671,000 in cheques, money orders, etc. The increasing hurry of modern life is probably responsible.

The Post Office is now the chief agency for transmission of small sums of money. In 1906-7 the number of money orders issued was 10,844,509, value £37,997,839. Of these 523,454, value £1,812,909, were sent by telegraph. The decrease in the number of money orders since the introduction of postal orders has now ceased, owing to an increase in the limit of value from £10 to £40 in 1904, coupled with a reduction in the rates of commission. The telegraphic money order system was extended to Germany in 1898, Austria, Belgium, Holland, Norway, and Switzerland in 1900, and since then to France, Egypt, Denmark, and some smaller countries.

The number of postal orders issued in 1906-7 was 102,247,000, value £40,878,000. In 1881-2, when orders were first issued, the number was about 4,500,000, value about £2,000,000. There have been successive increases in the number of values for which orders are issued, and decreases in the commission. In 1881 the series included ten orders from 1s. to 20s. In 1903 the series of values was extended to every complete 6d., from 6d. to 20s., and includes 21s. Since 1903 the postal order system has been gradually extended to India and all British Colonies except Australia and Canada.

The Savings Bank business of the Post Office began in 1861, and a large number of post offices were opened as savings banks. At the end of 1862 about 180,000 accounts had been opened, amounting to 1¾ millions sterling. The funds are handed over to the National Debt Commissioners for investment. The business has rapidly extended. From 1875 to 1880 the average number of accounts was 1,889,000, amounting to £29,000,000. The average amount deposited was £15 : 12 : 5, and the number of offices 5742. In 1906 the number of accounts was 10,332,784, and the amount deposited £155,996,446. The average deposit was £15 : 1 : 11, and the proportion of depositors to population was as 1 to 4·24. The proportion of depositors and the average deposit have always been lowest in Scotland and highest in Ireland. They vary inversely with the number of local banks and other private agencies which attract savings. The Post Office holds many large deposits from friendly societies, charitable institutions, and trades unions. Accounts are opened by County Court Registrars under the Workmen's Compensation Acts. Special arrangements are made to encourage the use of the Savings Banks in schools and the army. The Post Office also undertakes to invest the money of its depositors in Government stock, and to issue life insurances and annuities. The original limits for ordinary deposits were £30 in one year, and £150 in all. In 1891 the total limit was raised to £200. In 1893 the annual limit was raised to £50, and telegraphic withdrawals were allowed. In 1905 withdrawals on demand at any office up to £1 were authorised. The rate of interest allowed to depositors has always been 2½ per cent. Until 1896 the expenses of working and a profit were earned by surplus interest on investments. A surplus amounting to £1,598,767 was thus accumulated. From 1896 to 1899, owing to the reduced return on Consols, there was a total deficit of £34,123. From 1900 to 1902 there was again a profit of £65,451, but the reduction of interest on Consols to 2½ per cent changed this to an annual loss of about £100,000. This has been minimised by some reduction in working expenses, formerly 7d. per transaction, and 5·4d. in 1906. The chief difficulty in working arises from changes in the price of Government stocks in which the funds are invested. The low general return on investments when stocks are high leads to a great increase in deposits. When interest rises and Government stocks fall these deposits are withdrawn for investment elsewhere. If stock

has to be sold by the Savings Bank to meet these withdrawals there may be a considerable loss of capital.

The Telegraph service continued to increase until 1899-1900, when over 90 million telegrams were sent. Since then there has been a slight reduction, especially in short distance telegrams, owing to the increasing use of telephones. The number in 1906-7 was 89,493,000. The number of public telegraph offices has increased to about 13,000. There is no country where small and remote places are so well served. Each year the proportion of telegrams involving long transmission increases. Free delivery was given in 1897 within three miles, and this often costs more than the whole charge. The increasing cost of the ordinary service and the cheap rate for press telegrams, together with increases in the wages of the staff, involve a considerable annual loss.

The telegraphic monopoly created by the Act of 1869 extends to the working of public telephones (Attorney-General *v.* Edison Telephone Co., 1880). Licences to work exchanges were issued to several companies between 1881 and 1891. Mr. Fawcett hoped that free competition would develop the new business, but the United Telephone Company, with subsidiary companies, obtained control of the Bell and Edison patents, and thus gained a virtual monopoly till 1892. The Post Office opened a few exchanges, but was not allowed to compete actively. In 1896 the trunk lines of the National Telephone Company, which in 1891-2 had absorbed the United and other Companies, were purchased by the Post Office, and the company's working was limited to restricted local areas. In 1898 a select committee recommended the issue of licences to local authorities. Licences were issued to Glasgow and five other towns. The unsatisfactory results of working have caused the Glasgow and Brighton systems to be sold to the Post Office, and the Tunbridge Wells and Swansea systems to the National Telephone Co. Two remain now (1907) in Portsmouth and Hull. In 1902 the Post Office opened a competitive exchange system in London, and agreed in 1905 to purchase the National Telephone Company's plant on "tramway terms" in 1911, on the expiration of the licence. The Post Office trunk wire system, connecting areas, which in 1896 had only 29,000 miles of wire, now has about 146,000 miles. The capital expenditure to March 31, 1907, was £3,376,252. The Post Office has opened between 1900 and 1907 about 500 small exchanges in country places neglected by the company as unprofitable, but the company serves all the larger places and has an important system in London. The whole number of working telephones in June 1907 was, approximately, London 130,000, provinces 370,000. A. M. O.

POTTER, THOMAS BAYLEY (1817-1898), member of an influential Manchester family, carried on business in that city. In Parliament he occupied the seat formerly held by COBDEN, whose friend and follower he was. A vigorous exponent of the principles of the MANCHESTER SCHOOL, he was the founder of the Cobden Club, and wrote many of the tracts which it published. These comprise his principal written work.

PRICES, HISTORY OF. In continuation of the article on this subject in vol. iii. we give the following statement of the prices of commodities from 1897 to 1906:—

The following table shows the course of prices of forty-five commodities during the last twenty years as compared with the standard period of eleven years, 1867-77, which in the aggregate is equivalent to the average of the twenty-five years 1853-77 (see the *Journal of the Statistical Society*, 1886, pp. 592 and 648, and 1893, pp. 220 and 247):—

Summary of Index Numbers. Groups of Articles, 1867-77 = 100.

	Vegetable Food.	Animal Food.	Sugar, Coffee, and Tea.	Total Food.	Minerals.	Textiles.	Sundry Materials.	Total Materials.	Grand Total.
1897 . .	60	79	52	65	66	51	62	59	62
1898 . .	67	77	51	68	70	51	63	61	64
1899 . .	60	79	53	65	92	58	65	70	68
1900 . .	62	85	54	69	108	66	71	80	75
1901 . .	62	85	46	67	89	60	71	72	70
1902 . .	63	87	41	67	82	61	71	71	69
1903 . .	62	84	44	66	82	66	69	72	69
1904 . .	63	83	50	68	81	71	67	72	70
1905 . .	63	87	52	69	87	72	68	75	72
1906 . .	62	89	46	69	101	80	74	83	77
Average 1897-1906	62	84	49	67	86	64	68	72	70

The following figures show in each case the average index numbers of all the forty-five commodities for ten years; they give the best picture of the gradual movement of the *average* prices of *whole periods*, as the ordinary fluctuations are still further obliterated:—

1818-1827 = 111	1884-1893 = 71	1891-1900 = 66
1828-1837 = 93	1885-1894 = 69	1892-1901 = 66
1838-1847 = 93	1886-1895 = 68	1893-1902 = 66
1848-1857 = 89	1887-1896 = 68	1894-1903 = 66
1858-1867 = 99	1888-1897 = 67	1895-1904 = 67
1868-1877 = 100	1889-1898 = 66	1896-1905 = 68
1878-1887 = 79	1890-1899 = 66	1897-1906 = 70

From the decade 1889-98 to the decade 1894-1903 the average of ten years remained 66, the really lowest decade more closely calculated being 1890-99; the average for the last ten years has advanced to 70.

The table of *index numbers* is based on the average prices of the eleven years 1867-77, and the index numbers have been calculated in the ordinary arithmetical way; for instance, English wheat:—

	s.	d.	
Average, 1867-1877	54	6	=100, average point.
,, 1855	74	8	=137, or 37 per cent above the average point.
,, 1906	28	3	= 52, or 48 per cent below the average point.

The index numbers therefore represent simple percentages of the average point.

Certain articles which appear to have something in common have been grouped together, with the following result:—

		Example for 1906.	
		Total Numbers.	Average.
1. Vegetable food, corn, etc. (wheat, flour, barley, oats, maize, potatoes, and rice)	With 8 index nos.	498	62
2. Animal food (beef, mutton, pork, bacon, and butter)	With 7 index nos.	622	89
3. Sugar, coffee, and tea .	With 4 index nos.	184	46
1-3. *Food* . .	With 19 index nos.	1304	69
4. Minerals (iron, copper, tin, lead, and coal)	With 7 index nos.	710	101
5. Textiles (cotton, flax, hemp, jute, wool, and silk)	With 8 index nos.	643	80
6. Sundry materials (hides, leather, tallow, oils, soda, nitrate, indigo, and timber)	With 11 index nos.	815	74
4-6. *Materials* .	With 26 index nos.	2168	83
General average	With 45 index nos.	3472	77

The *general average* is drawn from all forty-five descriptions, which are treated as of equal value, and is the simple arithmetical mean as shown above.

The particulars given here were all derived from the information in Mr. A. Sauerbeck's communication to the Statistical Society, March 31, 1907.

PROSPECTUS. By the Companies Act 1900, as amended by the Companies Act 1907, which comes into force on July 1, 1908, section 38 of the Companies Act 1867 is repealed, and provision is made for the compulsory inclusion in every prospectus of many matters which the Legislature has thought material to be disclosed to an intending investor.

The Act requires every prospectus to contain certain particulars about the company,—the contents of the MEMORANDUM OF ASSOCIATION, the number of founders' shares, and the interests of the holders in the profits of the company, the voting rights attached to the various classes of shares, the names of the directors, their remuneration and qualification, and full particulars of the nature and extent of the interest of every director in the promotion of the company and the property to be acquired by it, particulars of previous issues, the minimum subscription, the names of the vendors, the amount and nature of the purchase consideration, the amounts of underwriter's commission, promotion money, and preliminary expenses, and the dates and parties to every material contract, with provision for inspection—in fact, everything which it is material for an intending investor to know.

Companies formed after July 1, 1908 (other than private companies), which do not issue a prospectus, are bound, before the allotment of any shares or debentures, to file with the Registrar a statement in lieu of a prospectus. The particulars to be disclosed in this statement correspond generally with the particulars to be disclosed in a prospectus, but the disclosure required is of a slightly less stringent character.

The criticism which suggests itself on the policy of the Act—and experience of the Companies Act 1900 confirms its truth—is that the information to be given is so extensive that the recipient of a prospectus is hardly likely to go through these answers to the statutory interrogatories, more particularly those which mainly concern him,—the vendors, their contracts, and interests. And, moreover, it is not difficult for the compiler of a prospectus to evade the spirit of the Act while complying with the letter, and to bewilder rather than enlighten. A. A. U.

PUBLIC ASSISTANCE. See articles in Appendix on UNEMPLOYED, and PENSIONS, OLD-AGE.

PUBLIC TRUSTEE ACT 1906 [6 Edw. VII. c. 55]. This Act comes into force on the 1st of January 1908, but so much, both as regards its scope and procedure, is left to rules to be framed thereunder, that its effective working will necessarily be delayed beyond that date. The main objects of the Act are to establish a government official, appointed by the Lord Chancellor, who shall take the place of the Court in the administration of solvent estates, the gross capital value of which does not exceed £1000, and who may act as "custodian trustee," or as a private trustee, executor, or administrator, either alone or conjointly with any person or persons appointed to such office in the ordinary way. It further provides for the investigation and audit of trust accounts. The public trustee, if applied to by the proper person, cannot refuse to administer small estates, unless he sees a good reason for so doing: with this exception, it is left to his option whether or no he will accept any trust, but he is debarred from doing so when the trust involves the management or carrying on of any business, or is created by a deed of arrangement for the benefit of creditors, or which is exclusively for religious or charitable purposes. The public trustee is constituted a corporation sole with

perpetual succession, so that all property vested in him passes automatically to his successor. The "custodian trustee" is a new personality in law. The public trustee may, if he consent to act as such, be appointed custodian trustee by order of the Court, by a testator, settlor, or other creator of a trust, or by a person having power to appoint new trustees. Any banking or insurance company, or other corporate body, may be authorised by the rules to act as custodian trustee, and may retain out of the trust property fees not exceeding those chargeable by the public trustees as custodian trustee. When a custodian trustee is appointed all the trust property is transferred to him as if he were sole trustee, and he has the custody of all securities and documents of title relating thereto, and all sums payable to or out of the income or capital of the trust property are paid to or by him, but he may allow dividends or other income to be paid to the other trustees, or to such person, or into such bank, and to the credit of such person as they may direct. The other trustees retain the management of the trust and provision is made for their access to the securities and for the necessary concurrence of the custodian trustee in legitimate dealings by them with the property. Under the definition of "trust" these facilities apply to property under a will or intestacy as well as to trust property strictly so called. The innovation is a salutary one, tending to meet the danger of trust securities and funds being left in the hands of private persons. The public trustee may, unless the will, settlement, or instrument creating the trust otherwise direct, and even then, if the Court so order, be appointed as trustee, executor, or administrator, whether the trust be constituted before or since the passing of the Act. Such appointment may be original or in substitution for or addition to persons already acting. The public trustee may be appointed sole trustee notwithstanding that two or more were originally appointed. If so authorised by the rules, he may accept and apply for probate or letters of administration, but in ordinary cases the widower, widow, or next of kin of the deceased are to have the preference if they apply. An executor or administrator, although he has acted, may, with the sanction of the Court, transfer the estate to the public trustee, either solely or jointly with the continuing executors, or administrator, if any. No special powers are conferred upon the public trustee when acting as an ordinary or private trustee. Any liability which the public trustee, if he were a private trustee, would be personally liable to discharge, is to be made good out of the Consolidated Fund of the United Kingdom, except when the liability is one to which neither he nor any of his officers has in any way contributed, and which neither he nor they could by the exercise of reasonable diligence have averted, in which case neither he nor the Consolidated Fund is subject to any liability. The fees to be charged by the public trustee are to be fixed by the Treasury with the sanction of the Lord Chancellor, and the incidence of fees and expenses as between capital and income is to be determined by the public trustee. An appeal to a judge of the Chancery Division is given to any person aggrieved by any act or omission of the public trustee in relation to a trust. As before stated, the Act institutes procedure for the investigation and audit of trust accounts, the term, as elsewhere, including executorship or administration accounts. Subject to rules under the Act, and unless the Court otherwise orders, the condition and accounts of any trust shall, on application to a judge of the Chancery Division, be investigated and audited by such solicitor or public accountant as may be agreed on by the applicant and the trustees, or in default of agreement, by the public trustee or some person appointed by him. Any trustee or beneficiary can apply for such investigation and audit, but it will not usually be granted more than once in twelve months. The auditor is given full powers of access to books, accounts, securities, and title-deeds, and of acquiring information from the trustees. At the close of the investigation and audit he is to forward to the person who obtained the audit, and to every trustee, a copy of the accounts, a report thereon, and a certificate to the effect that the accounts exhibit the true state of the trust, and that he has had the securities for the investments produced to and verified by him, or that the accounts and securities are deficient and in what respects. Every beneficiary is to be entitled to copies of the accounts, report, and certificate, at his own expense.

The remuneration of the auditor and other expenses are to be prescribed by rule, and, unless the public trustee otherwise directs, are to be borne by the estate, but the public trustee may order them to be borne by the applicant or the trustees personally, or partly by them and partly by the applicant.

The above provisions obviously do not apply to trusts in which the public trustee is himself concerned, but the Act specifies that the rules shall deal with the accounts to be kept by the public trustee and an audit thereof. Mr. C. J. Stewart has been appointed public trustee for a period of five years.

It is difficult to forecast the practical results of the Act, especially in the absence of the rules. The confidence and apathy of beneficiaries may tend to make it nugatory, while the absolute option of refusal given to the public trustee will probably deter settlors, still more testators, from appointing him sole and original trustee, the position the Act seems to contemplate as his normal one. J. R. P.

RABBENO, UGO, was only thirty-three when he died on the 3rd of September 1897. He had been shortly before called to the University of Modena.

Rabbeno's mind was always directed towards concrete and practical problems. The theoretic aspects of a problem, or pure scientific inquiry, never suggested research to him, though these points came in later, as results discovered by a research commenced for practical purposes. His scientific production is consequently generally descriptive. Attention was first attracted to him when he published his essays on co-operation in England and in Italy, *La cooperazione in Inghilterra*, 1885; *La cooperazione in Italia*, 1886; and his reputation was consolidated in 1889 by his book on co-operative production in Europe and America (*La società cooperativa di produzione*). The study of facts, their proper classification and analysis, led him to the conviction that co-operative production could only in very particular conditions result in success, and that he had himself originally overestimated its powers. After co-operation he turned to examine protection in America, again avoiding arguments deduced from principles and trying to get facts to speak for themselves. His book, published in 1893 in Italian, was translated into English. When he was overtaken by death he [illegible] accumulating facts concerning land legislation [illegible] this subject were [illegible] no was a disciple [illegible]erno, but the drift of his [illegible] to oppose all those whom he con[illegible] disciples of the classical economists and not purely and simply historians, statisticians, observers, and analysts of facts. He wrote in foreign reviews some articles on current Italian literature—which were considered biassed through his horror of theory. As a teacher he was very highly appreciated for the breadth of his knowledge and his enthusiasm for his vocation. M. P.

RAILWAYS

Railways, p. 771. Light Railways, p. 773.

IN an industry as modern as are railways, it is not surprising that the changes since this work was originally published are great. [See RAILWAYS, vol. iii.] The world's mileage was then 450,000; in 1905 it was about 560,000. Europe has 192,000 against 155,000 miles. But it is outside Europe that the increase has been greatest; more than half the total mileage —290,000 miles—is on the American continent, 220,000 in the United States alone. Asia has over 50,000 miles, Africa 16,000, Australia 17,500. The capital invested in the world's railways, estimated in 1895 as £7,336,000,000, is estimated ten years later as £9,136,000,000. International statistics of traffic are not available, but it is probable that the volume has doubled in the last ten years, for the railways of the world have become vastly more efficient in recent years. In the United States, which nowadays leads the world in railway affairs as definitely as England did a generation ago, net loads of 2000 tons drawn by a single engine are now an every-day practice. In the matter of net profit, the Prussian railways which return over 6 per cent on their total capital, and pay out of their surplus income a large part of the expenses of the Prussian Government, still lead the world, but the relation between the railways of Great Britain and those of the United States has been practically inverted in the last decade. Ten years ago the figures of net receipts on the total capital involved were for Great Britain and the United States respectively 4·33 per cent and 3·34 per cent. In 1906 Great Britain had fallen to 4·03 per cent, while the United States had risen to 5·68 per cent. The change has naturally been accompanied by a corresponding appreciation of the value of the railway stocks in the United States and depreciation here. When we find that the density of goods traffic on American lines has increased from 519,000 ton miles per mile of line in 1896 to 982,000 ton miles in 1906, and that the 138 per cent increase of traffic has been worked with only 22¼ per cent increase of train mileage,—an increase of 90 per cent in the density of goods traffic having been attended by no increase in the number of trains per mile of road,—we have no difficulty in understanding the origin of the increased prosperity of the American railways. While there can be no doubt that economies of operation on a similar scale are impossible in this country, it remains for the future to show what economy, more scientific study and control of operating methods can produce with us.

Even more important from a public point of view than questions of operating efficiency, is the question of the relation between the railways and the state (MUNICIPAL AND GOVERNMENT TRADING, App.). The two main arguments against state ownership, more especially in democratic countries, are, 1, improper political interference, and, 2, inferior operating efficiency. Both shall be indicated from recent utterances of responsible public men. In reference to political pressure, Mr. Price, formerly general manager of the Cape Government railways, now general manager of the Central South African railways, reports to the Cape Government under date of Feb. 22, 1907, as follows:—

> The drawbacks in the management of railways in the Cape that call for removal arise from the extent to which, and the manner in which the authority of Parliament is exercised. . . . Public authorities, influential persons, and others bent on securing concessions or other advantages which the general manager has either refused in the conscientious exercise of his functions, or is not likely to grant, make representations to the commissioner (as the ministerial head of the Government), supplemented by such pressure, political influences, or other means, as are considered

perfectly legitimate in their way, and are best calculated to attain the end applicants have in view. Many members of Parliament act similarly in the interests of their districts, constituents, or railway employees, in whom they happen to be interested. It is by no means unknown for the requests in both classes of cases to coincide somewhat with a critical division in Parliament present or in prospect. . . . I do not regard it as open to doubt that the Colony as a whole has suffered severely in consequence . . . and that the need for a remedy is pressing if the railways are to be conducted as a business concern for the benefit of the Colony. . . . There can be little doubt that in the Cape Colony political considerations have influenced the adoption of new lines and their construction, many if not most of them of an unprofitable character. . . . A material change is imperatively necessary in this respect if only to insure the solvency of the Colony.

Similar charges are made, if not with such exact personal knowledge from the inside, yet doubtless on grounds of equal or almost equal strength, against the state railway administration in other democratically governed countries. It should be added that where, as in Prussia, the administration is mainly autocratic, these considerations do not apply with equal force.

The second objection may be given in the words used by Mr. Taft, secretary of war, and possibly future president of the United States. In August 1907, he stated that—

> Existing Government railroads are not managed with either the efficiency or economy of privately managed roads, and the rates charged are not as low and, therefore, not as beneficial to the public.

This point has been worked out in detail by M. Marcel Peschaud, in two articles on "Les Chemins de Fer de l'État Belge" in the *Revue Politique et Parlementaire* for May and June 1896, which have been recently translated by Mr. E. A. Pratt, *State Railways*, London, 1907, and which compare the efficiency of the Belgian state railways with the privately owned Northern Railway of France.

A similar comparison between the private French railways and the Government railways of Germany has been worked out by M. Colson. It may be summarised as follows: Rates and fares in the two countries are practically identical; wages on French railways are higher; coal is much dearer; the proportion of heavy, cheaply-handled traffic is much smaller; gradients are certainly not less severe; the density of traffic is much less; and the service given to the public is certainly not inferior. Yet, whereas the French railways are worked at about 53 per cent of the gross receipts, the percentage of operating expenses in Germany is fully 10 per cent higher. It is true that the average haul of goods on French railways is 25 per cent longer than in Germany, but this difference certainly does not counterbalance the other advantages, still less account for the immense difference in operating economy.

Yet, in spite of these unanswered and probably unanswerable objections of theory, private ownership of railways is becoming more and more exceptional. Switzerland, largely moved by resentment at the alleged dictation of foreign capital and by desire to strengthen the Federal Union, has nationalised its railways. Italy, finding it impossible to adjust the relationship between the owning state and the leasing companies, has taken the working into its own hands, with results that so far have been the reverse of successful. In Austria and in Japan the companies are being bought out one by one. In Russia the same process was going on till interrupted by the war. In Ireland the popular opinion, as voiced by the evidence given before the Vice-Regal Commission on Irish Railways now sitting in Dublin, runs strongly in the same direction. On the other hand, the Indian Government has declared itself in favour of the encouragement of private enterprise, while in the United States the pronouncement of Mr. Bryan in favour of Government ownership has disclosed an overwhelming mass of public opinion opposed to that policy. The most interesting development is, however, in the republic of Mexico. In that [illegible] Government has, [illegible] existing owners [illegible] deferred shareholder in [illegible] The Government gets at present [illegible] it has a valuable reversion, and holds the [illegible] dominating voting power. The existing directorates remain undisturbed, but on condition that unless their policy in broad outline conforms to the Government view, the Government can use its votes as a shareholder to turn them out of office.

The main argument for government ownership lies in the fact that, while uncontrolled private ownership is impossible, government control is difficult and has so far not been over successful. The English public are by no means satisfied with private management here, while bitter hostility to that management in the United States has been manifested in a vast mass of recent legislation, not only at Washington, but at almost every State capital throughout the Union. In America the railways are steadily being brought under closer control and supervision, and the conflict between the respective rights of the State and Federal Governments seems likely to raise the most serious constitutional difficulties that the country has had to face since the civil war. In England considerable changes are apparently coming. What form they will take cannot yet be seen; but, we shall do well to remember that there are two undeniably successful pieces of machinery for keeping railways in touch with public opinion. The one is the Massachusetts State

Railway Commission, the other the Prussian Local and National Railway Councils. Neither of them possess any compulsory powers whatever.

Of indirect means of controlling railways successfully none are more important than full and accurate information and adequate economic teaching. Under both heads considerable progress has been made here in recent years. A committee is now sitting at the Board of Trade to consider the revision of our present archaic railway accounts and statistics, while courses of lectures on railway questions have been established in the universities of Manchester, Liverpool, and Birmingham, and have been developed on a quite considerable scale and with great success at the London School of Economics.

Light Railways.—The Light Railways Act of 1896 has failed to produce the effects that were hoped for. To some extent it has been used (*a*) by existing railway companies for the promotion of new branches, thereby obtaining land cheaper and avoiding certain burdensome and expensive requirements of the ordinary law, and (*b*) by tramway promoters who have thus been enabled to escape compliance with the exacting requirements of the Tramways Act. But of light railways in poor districts, such as exist by thousands of miles in France, Belgium, Germany, and Italy, the mileage constructed is practically negligible. The failure of such lines to come into existence is, however, no evidence that they are not wanted. At present they are commercially impossible. Assistance from public funds, which the Act of 1896 contemplated, has only been forthcoming to a trifling extent. The cost of construction has been excessive, and restrictions unknown on the Continent are required by English public opinion. But the very rapid development of motor carriage, both of passengers and goods, on ordinary roads has within the last year or two entirely altered the conditions of the problem.

Of recent books published in England there may be mentioned Acworth, *Elements of Railway Economics*, Oxford, 1905.—Pratt, *Railways and Their Rates*, London, 1905.—Disney, *The Law of Carriage by Railway*, London, 1905.—Cunningham, *Railway Nationalisation*, Dunfermline, 1906; and Paish, *British Railway Position*, London, 1902. American literature is both more voluminous and more valuable. There may be mentioned Ripley, *Railway Problems*, Boston, 1907.—Eaton, *Railroad Operations; How to Know Them*, New York, 1900.—B. H. Meyer, *Railway Legislation in the United States*, New York, 1903.—Hugo R. Meyer, *Government Regulation of Railway Rates*, New York, 1905.—M'Pherson, *Working of the Railroads*, New York, 1907; and T. F. Woodlock, *The Anatomy of a Railroad Report and Ton Mile Cost*, New York, 1906.—*The Report of the Senate Committee on Bills to amend the Inter-State Commerce Act*, Washington, 1905, 5 vols., is a mine of information on the whole subject, while the section dealing with "Transportation" in the *Final Report of the Industrial Commission*, Washington, 1902, is of very considerable value.

The nucleus of a railway library is now being formed in connection with the London School of Economics. W. M. A.

RAVENSTONE, PERCY (early 19th century), wrote in 1821, *A few Doubts as to the Correctness of some Opinions generally entertained on the subjects of Population and Political Economy.* Ravenstone was the earliest advocate of the theory of surplus value subsequently adopted by MARX (*q.v.*), but he was not a communist, nor did he deny the natural right to private property, which he said is "the right to the work of one's own hands."

[E. R. A. Seligman, "On some neglected British Economists," *Economic Journal*, London, 1903].

RITCHIE, DAVID GEORGE (1853-1903), late professor of Logic and Metaphysics in the University of St. Andrews.

He was educated at Jedburgh Academy and Edinburgh University, where he obtained the degree of M.A. with first class honours in classics. He then proceeded to Balliol College, Oxford, where he gained a first class both in moderations and in the "final greats" school. In 1878 he was elected a Fellow, and in 1881 a tutor of Jesus College, and from 1882 to 1886 he also acted as tutor at Balliol.

During his stay at Oxford he devoted his studies mainly to Moral Philosophy, but in 1894 he was appointed professor of Logic and Metaphysics in St. Andrews University.

In the early days at Oxford he came under the influence of T. H. Green and Arnold TOYNBEE. He was originally destined for the clerical profession, but he ceased to be able to accept the orthodox creed. At Oxford he was a zealous democrat, and strongly believed in state action wherever possible; but he did not become a doctrinaire socialist, "nor did he accept as a whole any of the numerous socialistic systems of recent times. But he believed profoundly in the socialistic attitude as against any form of individualism, empirical or *a priori*." The extent to which the state may interfere should depend, however, on the form of government.

He applied the theory of natural selection to human society, and concluded that it "lends no support to the political dogma of *laissez faire*."

The principles of state interference, and practical questions of social and political ethics he discusses from the point of view of evolutionary utilitarianism. The ethical and political ideal is social well-being. "If we say the ultimate end is the well-being of all mankind, and the end we should aim at is the well-being of all that portion of mankind whom we can practically affect, we mean the same thing as the utilitarian when he speaks of the greatest happiness of the greatest number;

but it is put in a less misleading way." State interference in accordance with this principle will permit of the realisation of the individual, and will not restrict liberty. "There is no necessary or absolute antithesis between state action and individual liberty. . . . All salutary state action must be such as will give individuals as far as possible the opportunity of realising their physical, intellectual, and moral capacities. In a genuine and honestly worked democratic state, state action and individual liberty will no longer be opposing principles, as they are under despotism tempered by partial anarchy; individual liberty will exist, not in spite of, but by means of state action."

The chief writings of Ritchie are: essay on "The Rationality of History" to the volume of essays on *Philosophical Criticism* edited by Seth and Haldane, 1883.—Translation into English (along with Lodge and Matheson) of Bluntschli's *Theory of the State*, 1889.—*Darwinism and Politics*, 1889.—*Principles of State Interference*, 1891.—*Darwin and Hegel*, 1893.—*Natural Rights*, 1895.—*Studies in Political and Social Ethics*, 1902.—*Plato*, 1902.—*Philosophical Studies* (edited, with memoir, by Robert Latta), 1905.—He contributed to *Mind*, *The Philosophical Review*, and *The International Journal of Ethics*, and wrote papers for the Aristotelian Society. J. H. J.

ROOKE, JOHN (late 18th century, early 19th century), was led by the political events of 1811 and 1812 to publish in the *Farmer's Journal* of 1814, 1815, upwards of fifty essays on the economic basis of English prosperity. The substance of these he published in 1824, as *An Inquiry into the Principles of National Wealth, illustrated by the Political Economy of the British Empire.* Professor Seligman says, in his article "On some neglected British Economists" (*Economic Journal*, 1903), that Rooke was "the first to lay down the rule of marginal cost as a universal principle," and "that the doctrine of rent was developed practically simultaneously by MALTHUS, WEST, TORRENS, and Rooke in 1814."

To make his title to having been the first to put forward these opinions clear, Rooke wrote the *Claim to the Original Publication of certain new Principles in Political Economy in a Letter to E. D. Davenport, Esq.*, London, 1825.

RUSKIN, JOHN (1819-1900), first known as a writer on art, was drawn into the discussion of economics by study of the social and political conditions which he deemed requisite for the production of great works of art. The point of transition is best seen in ch. vi. of vol. ii. (1853) of *The Stones of Venice* (separately published 1854 as *On the Nature of Gothic Architecture and herein of the True Functions of the Workman in Art*; re-issued from the Kelmscott press with an introduction by William Morris, 1892). As the friend and disciple of Carlyle, Ruskin's criticism of the economic doctrines and methods, current at the time, followed the lines of his master; in denunciation of the abstraction of the "economic man," and of society bound by the "nexus of cash payments," in protests against *laissez faire* and unrestricted competition, and in exhortations for social reorganisation under "captains of industry." These criticisms were all contained in *Unto this Last*, and were reiterated in the opening letters of *Fors Clavigera*, which Carlyle applauded as "fierce lightning bolts poured into the black world of anarchy all around him" (*Corr. of Carlyle and Emerson*, ii. 352). Ruskin's protest against the egoistic basis of abstract political economy was accompanied by criticisms of some of its specific doctrines. He insisted on the substitution, for exchange value, of a biological basis in discussions of wealth; "there is no wealth but life" (*Unto this Last*, § 77), "intrinsic value is the absolute power of anything to support life" (*Munera Pulveris*, § 13). Also wealth is relative to the capacity of the man, or the society, to use it, and he coined the word *illth* to express the negative condition (*ib.* § 37). The "faultless definition of wealth" was to be found, he said, in Xenophon: "Things are only property to the man who knows how to use them" (see his preface to a translation of *The Economist* of XENOPHON, issued as vol. i. in his *Bibliotheca Pastorum*). He devoted many pages to a destructive criticism of the doctrine that "a demand for commodities is not a demand for labour" (*Unto this Last*, § 76, and *Fors*, Letter 2), and insisted on the importance of the theory of consumption. In these respects the validity of Ruskin's criticisms is now widely admitted; but, unmindful of his own conception, that wealth can be increased by placing the right things in the right hands, he went on to assert that there can be no profit in exchange (*e.g.*, *Unto this Last*, § 67, and *Fors*, Letter 45, § 82). In his earlier essays he attacked exorbitant rates of interest (*Munera Pulveris*, § 98); in his later, he denounces all interest as "usury" and illegitimate. His denunciation of machinery is often somewhat misunderstood. He held that the use of steam to do what could be done by agency of wind and water was a waste both of natural force and of human life; but he hoped great things from the development of electricity (*Lectures on Art*, § 123, and *Fors*, Letter 44).

Ruskin essayed to be a social reformer as well as an economist, and started a "Guild of St. George" to bring the people back to the land, and to educate and sustain them there under ideal conditions of his own devising. His studies in Utopia are contained in *Time and Tide* and *Fors Clavigera*. The story of his actual attempts at realisation, which amounted to no great things, is told in the Introduction to vol. xxx. of his complete works (1907). Of more importance has been his influence in the field of politics. His economic ideas led him in

1862 to advocate free compulsory education; technical schools, in connection with which the State, without any attempt to establish monopolies, would set standards of "exemplary work" and "pure and true substance"; state provision for the unemployed by labour colonies (with penal work for those who "could work if they would"); and a reform of the Poor Law. He was an earnest advocate, at the same date, of old-age pensions for "soldiers of the ploughshare as well as soldiers of the sword" (*Pol. Econ. of Art*, § 15). He also urged fixed wages in all employments. He was opposed to land nationalisation, but insisted upon the principles, "The land to those who can use it," and "By whomsoever held to be made the most of" (see *Time and Tide*, § 151). His *Unto this Last* has had a very wide circulation, both in its complete form and in a penny pamphlet of extracts from it called *The Rights of Labour*, and many of the labour leaders of to-day have been among his readers (see *Review of Reviews*, June 1906). Ruskin's treatment of economic subjects is very discursive, and there are few of his later books in which some discussion of them is not to be found. The following are those which deal principally, or largely, with them:—

1. *The Political Economy of Art*, 1857 (reissued, with additional matter, in 1880 as *A Joy for Ever and its Price in the Market*). 2. *Unto this Last*, four essays in the *Cornhill Magazine*, 1860; collected, with additions, 1862 (translated into French, German, and Italian, 1902). 3. *Gold: a Dialogue* (written 1863 in reply to J. E. Cairnes in *Macmillan's Mag.* Nov. 1863, not printed till 1891). 4. "Essays on Political Economy," *Fraser's Mag.* 1862-63; collected, with additions, as *Munera Pulveris*, 1872. 5. *Time and Tide by Weare and Tyne*, 1867. 6. *Notes on the General Principles of Employment for the Destitute and Criminal Classes*, 1868 (reprinted, with additions, in *The Queen of the Air*, 1869). 7. *Fors Clavigera, Letters to the Workmen and Labourers of Great Britain*, 1871-1884. 8. "Home and its Economies" in the *Contemporary Rev.*, May 1873 (reprinted in *On the Old Road*, 1885). 9. "Usury" in the *Contemporary Rev.*, February 1880 (similarly reprinted). 10. Introduction to R. J. Sillar's *Usury and the English Bishops*, 1885 (similarly reprinted).

Of the writings in the above list, No. 1 is in vol. xvi. of *The Works of Ruskin*: Library edition; while Nos. 2-6 and 8 are collected in vol. xvii. of the same, with a large number of letters to the daily press on economic subjects, and an expository introduction. In vol. xxvii. of the same there is a similar introduction dealing with the economic matter in *Fors Clavigera*. Among numerous other studies of Ruskin as an economic writer are:—*John Ruskin, his Life and Work*, and *A Disciple of Plato*, by William Smart, 1883; *John Ruskin, Economist*, by Patrick Geddes, F.R.S., 1884; "Ruskin as a Political Economist," by F. J. Stimson in *Quarterly Journal of Economics* (Boston, 1888); *John Ruskin, Social Reformer*, by J. A. Hobson, 1898; and "Lessons from Ruskin," by C. S. Devas in *Economic Journal*, March 1898. E. T. C.

SAINT-MARC, HENRI (1854-1896), an economist of much ability and promise. He had very shortly before his death been appointed to deliver a course of lectures on the history of economic theories at the University of Paris.

His principal works are: *Étude historique et juridique sur l'entreprise du canal du Midi*, 1888.—*Étude sur l'enseignement de l'Économie politique dans les Universités d'Allemagne et d'Autriche*, 1892.—He also translated Cossa's *Primi Elementi di Scienza delle Finanze* into French, and contributed many magazine articles, in particular to the *Revue d'Économie Politique*, edited by Professor Gide, who discusses Saint-Marc in an article published in that periodical, November 1896.

SEMINAR. See COMMERCE, FACULTY OF, IN THE UNIVERSITY OF BIRMINGHAM.

SIDGWICK, HENRY (31st May 1838-28th August 1900), was born at Skipton in Yorkshire, where his father, the Rev. William Sidgwick, was headmaster of the Grammar School. After a brilliant career at Rugby, he entered at Trinity College, Cambridge, in October 1855. In 1859 he was Senior Classic, Senior Chancellor's Medallist, and a Wrangler. In October 1859 he was elected to a Trinity Fellowship; and at the early age of twenty-one he settled down to the work of a University teacher, which was destined to constitute the main occupation of his life. At first he held a Lectureship in Classics, but this was exchanged in 1867 for a Lectureship in Moral Science, and he soon became the acknowledged head of the Moral Sciences School in Cambridge. In 1869—two years before the passing of the Act for the Abolition of Tests—he resigned his Fellowship and Assistant Tutorship at Trinity on account of scruples which he felt in regard to the religious tests then in force; but he retained his lectureship, and was thus enabled to continue his work at Cambridge, though with a considerably diminished income. Appointed in 1875 to a Praelectorship in Moral and Political Philosophy at Trinity College, in 1883 he was elected Knightbridge Professor of Moral Philosophy in the University. This post he held until within a few months of his death. In 1876 he married Eleanor Mildred Balfour, a granddaughter of the second Marquess of Salisbury.

In his college and university teaching Sidgwick covered a wide field, giving courses of a varied character on ethics, metaphysics, political science, and political economy. At

the same time he did not limit himself to purely teaching work. He was one of the leaders in the academic reorganisation which followed the coming into force, in 1882, of the statutes framed by the University Commission of 1877; and the development of new studies, which dated from the establishment of the Moral Sciences and Natural Sciences Triposes in 1861, owed much not merely to his initiative and influence, but also to his generosity in temporarily endowing new posts at critical periods. In promoting the higher education of women at Cambridge, and more particularly in the foundation of Newnham College, of which his wife afterwards became Principal, he was one of the moving spirits. He devoted much attention to investigating the phenomena of "spiritualism," chiefly in connection with the Society for Psychical Research, of which he was the first president. Another subject in which he took great interest was the organisation of private charity, and the formation of the Cambridge Charity Organisation Society was mainly due to his initiative.

Although for nearly forty years little of importance happened in the University of Cambridge with which Sidgwick had not some concern, his life apart from academic affairs was an uneventful one. It was a very beautiful life, inspired by a singularly high sense of duty, and realising in a peculiar degree the ideal of plain living and high thinking. Apart from his writings, Sidgwick exerted a wide personal influence, and his counsel was much sought after on many questions. As a talker, he had deservedly a high reputation. His personal charm was great, and in all social intercourse he was kindly, courteous, and considerate.

Sidgwick's first work of importance, and on the whole his greatest work, was *The Methods of Ethics*. In this work the methods of egoism, intuitionism, and utilitarianism are discussed, and the most striking results reached are the relations brought out between these different methods. Sidgwick is frequently described as a utilitarian: so far as this description is accurate, it needs to be supplemented by the statement that he was a utilitarian upon an intuitionist basis. As regards the final reconciliation of utilitarianism and egoism, he admits that he cannot offer a solution apart from the assumption of a "sanction," the validity of which cannot be established on ethical grounds alone. His other ethical works are mentioned at the end of this article.

Sidgwick's general attitude as a metaphysician was critical and negative, and his special antagonism to KANT and the transcendental school is shown in a volume published after his death containing courses of lectures on the metaphysics of Kant and T. H. Green. Another volume, also published posthumously, contains lectures on the scope of philosophy, and its relations to other studies, especially psychology, history, sociology.

Political philosophy was treated by Sidgwick from the analytical and deductive standpoint in *The Elements of Politics*, and from the evolutionary standpoint in *The Development of European Polity*.

In political economy, Sidgwick's work was mainly of an analytical and deductive character. His general view of the proper method of economic science was that it varies with the department or aspect of the science under consideration; and he held that in the treatment of the theory of production, the deductive element is necessarily subordinate. For the determination of the fundamental laws of distribution and exchange, however, he maintained the general legitimacy of the deductive and hypothetical method, recognising at the same time the need for specific experience in the application of economic laws to concrete cases. In a letter to a friend he once remarked on the pleasure that he derived from political economy as an intellectual exercise; and his own *Principles of Political Economy*, with its subtle analyses and acute criticisms, must always be a source of intellectual enjoyment to a reader whose own bent of mind is deductive and critical. As an exercise in deductive reasoning, and in the analysis and balancing of arguments and counter arguments, there are few works that afford a more admirable intellectual discipline for the student.

The work contains some striking analyses of fundamental economic conceptions, such as wealth, value, capital. Sidgwick held that economists, generally speaking, were inclined to underrate the importance of *seeking* for the best definition of each cardinal term, and to overrate the importance of *finding* it. He remarks that "what we gain by discussing a definition is often but slightly represented in the superior fitness of the formula that we ultimately adopt; it consists chiefly in the greater clearness and fulness in which the characteristics of the matter to which the formula refers have been brought before the mind in the process of seeking for it." Judged by the standard here proposed, Sidgwick's own discussions of definitions must be pronounced thoroughly successful.

His treatment of the theories of distribution and exchange is based primarily on J. S. MILL's treatise. But he did not leave Mill's doctrines as he found them. His mind was pre-eminently critical, and indeed his criticisms of his own conclusions tended to restrict his production of constructive work. Mr. Bryce remarks of him that "his natural bent was to distrust all that was obvious and to discover flaws in every accepted doctrine." Thus every position taken by Mill is subjected by Sidgwick to searching criticism, and at every point corrections and

limitations are introduced. The progress is no doubt from comparative simplicity, or at least apparent simplicity, to complexity; and this work of Sidgwick's, like his other works, is difficult reading.

One of the most original portions of the *Principles* is the theory of international values therein set forth. The view of Mill and CAIRNES was that the peculiarity of the theoretical determination of international values depends upon the imperfect mobility of labour and capital between different countries, whereby cost of production is prevented from determining the normal value of imported commodities. Sidgwick holds, in opposition to this view, that the peculiarity depends primarily not on the imperfect mobility of labour and capital, but on the cost of carriage between different countries. Take two countries, England and Spain, and suppose that, after trade is established between them, there is at least one commodity—say corn—which is produced in both countries. Then, according to Mill's general theory of value, "the relative values of cloth and corn in England must be determined by their comparative costs of production; and, again, the relative values of corn and wine in Spain must be determined in the same way." Hence, if we suppose cost of carriage eliminated, "the values of both cloth and wine relatively to corn, and therefore relatively to each other, must be as much determined by cost of production as the values of home commodities are," although it does not of course follow that the cloth and wine will exchange for each other in proportion to their respective costs. Sidgwick goes on to show how the problem is altered when cost of carriage is no longer supposed to be eliminated.

In addition to the *science* of political economy, Sidgwick recognises, in the Introduction to the *Principles*, an *art* of political economy, which he describes as concerned mainly with the theory of what ought to be done by government to improve production and distribution, and to provide for governmental expenditure; the art includes also the consideration of the general principles of distributive justice, and of the principles that ought to govern private conduct in economic matters. The great value of Sidgwick's treatment of these practical problems is admitted by critics who do not find his treatment of theoretical economic problems altogether to their taste. In weighing judicially the advantages and disadvantages of given courses of action, Sidgwick was unrivalled; and the whole discussion is marked in a high degree by practical wisdom.

[The following is a chronological list of Sidgwick's works, omitting magazine articles and reviews, etc.:—*The Methods of Ethics*, 1874 (6th edition, differing in important respects from the 1st, 1901); *The Principles of Political Economy*, 1883 (3rd edition, 1901); *Outlines of the History of Ethics for English Readers*, 1886 (5th edition, 1902); *The Elements of Politics*, 1891 (2nd edition, 1897); *Practical Ethics*, 1898; *Philosophy, its Scope and Relations*, 1902; *Lectures on the Ethics of T. H. Green, H. Spencer, and J. Martineau*, 1902; *The Development of European Polity*, 1903; *Miscellaneous Essays and Addresses*, 1904; *Lectures on the Philosophy of Kant and other Philosophical Lectures and Essays*, 1905. The last five of these works were published posthumously. To this Dictionary Sidgwick contributed the articles on ECONOMIC SCIENCE AND ECONOMICS, vol. i.; POLITICAL ECONOMY, SCOPE AND METHOD; POLITICAL ECONOMY AND ETHICS, vol. iii. *A Memoir of Henry Sidgwick* by Arthur Sidgwick and Eleanor Mildred Sidgwick was published in 1906.] J. N. K.

SILVER, PRODUCTION AND COINAGE OF, 1896-1905. In continuation of the article, SILVER, DISCOVERIES OF, which gave the annual average production of fine silver to the year 1895, the following statement continues the total for the ten years from 1896-1905:—

Production of Silver in the World since 1896.

	Fine Ounces.	Commercial Value.	Coining Value.
		£	£	£
1896	31,412,274	21,171,860	40,613,840
1897	32,084,216	19,250,540	41,482,600
1898	33,811,051	19,948,520	43,715,360
1899	33,667,490	20,200,520	43,529,640
1900	34,718,273	21,525,280	44,888,240
1901	34,602,257	20,761,140	44,738,260
1902	32,552,696	17,252,940	42,088,380
1903	33,537,864	18,110,440	43,362,080
1904	32,867,281	19,063,020	42,495,080
1905	33,545,587	20,462,800	43,372,060
	332,798,989	197,747,060	430,285,540

The coinage of the world for the same period has been as follows:—

Coinage of Silver in the World.

	Silver.	
	Fine Ounces.	Coining Value.
	£	£
1896	24,678,848	31,908,005
1897	25,955,016	33,558,001
1898	23,092,204	29,856,587
1899	25,713,233	33,245,393
1900	28,672,589	37,071,631
1901	21,487,933	27,782,378
1902	29,965,645	38,743,072
1903	32,231,902	42,359,166
1904	29,066,467	35,301,729
1905	28,976,663	34,543,820
	269,840,200	344,369,782

The commercial value, as will be observed, differs largely from the coining value.

The increased use of gold as standard renders it impossible to give any closer estimate. In the United States, where the gold standard was adopted in 1900, it is suggested that the limit of the stock of subsidiary silver coin in that country should be raised to $120,000,000 (£24,000,000), and there appears to be no good reason why the coinage of silver dollar pieces should not altogether cease, and in that country the entire stock of silver bullion on hand be used for the subsidiary coins.

The recoinage of the older coins in France and Germany during the last three years has been considerable.

Thus in France the value of the recoinage of silver has been in—

	£
1903	63,351
1904	480,000
1905	447,758
	991,109

This was all in pieces of less than 5 francs, and except for a value of £80,000 in 1904, was met from the recoinage of old coins, principally 5 franc pieces.

In Germany the value of the recoinages during the last three years was as follows:—

	£
1903	3,006,952
1904	3,239,896
1905	3,420,288
	9,667,136

This was derived entirely from old coin, and was, with the exception of a value of £1,799,953 in 1903 and of £994,366 in 1904, used for coins below the value of 5 marks.

[See GOLD, THE INCREASE IN THE PRODUCTION OF, Appendix.]

SMALL HOLDINGS. An increase in the number of small agricultural holdings has been very widely advocated in recent years, with the object of affording further opportunities of advancement to the rural population, and of placing some check on the migration to the towns. Experiments have been made in many parts of the country by public-spirited landlords and philanthropic associations, many of which have attained a considerable measure of success, but there is still much difference of opinion as to whether under the existing conditions, fiscal and other, affecting agriculture, a large extension of small holdings is likely to prove an economic success. Various attempts have been made by the Legislature to facilitate their establishment, but hitherto with no appreciable result (see SMALL HOLDINGS ACT, 1892), and, following an inquiry by a Departmental Committee of the Board of Agriculture in 1906 [Cd. 3277], the Small Holdings and Allotments Act 1907 has been passed and comes into operation on Jan. 1, 1908.

During a great part of last century there was a very general consensus of opinion, largely based on the teaching of JOHN STUART MILL and the observations of ARTHUR YOUNG, in favour of the creation of PEASANT PROPRIETORS (*q.v.*), but, in recent years, the experience of such a system both at home and abroad, and the opportunities which it offers for mortgages and uneconomic subdivision, has convinced the majority of those interested in the subject that a system of tenancy, provided there is reasonable security of tenure, offers a better chance of success to the small holders than a system of ownership. Accordingly the Act of 1907 has a strong bias towards the letting rather than the selling of small holdings.

The machinery of the Act consists of a careful combination of State initiative and local management, the duty of providing small holdings being placed on the County Councils, while a central authority is set up to supervise and control their work. The Small Holdings Commissioners, appointed by the Board of Agriculture, are entrusted with the duty of ascertaining the demand for small holdings. They report to the Board, who may require the County Council to prepare a scheme for providing the small holdings needed. If the County Council unreasonably refuse to act, the Board may order the Commissioners to prepare a scheme and to carry it out, the cost being charged against the County Council If the Commissioners, acting in default of the County Council, incur a loss the Board may pay the whole or part of the loss, and if a County Council incurs a loss in carrying out a scheme the Board pay half of the loss.

The Board are themselves empowered to establish small holdings with the object of demonstrating their feasibility on an economic basis, and they may out of the funds at their disposal pay to the County Councils the whole or part of the expenses of the acquisition of land (other than the purchase price, compensation, or rent).

The period for the repayment of loans raised by County Councils for the purchase of land may be extended to eighty years, and they are enabled to borrow from the Public Works Loans Commissioners on very favourable terms. Compulsory powers for the purchase and hiring of land for small holdings are conferred on County Councils, and they may delegate any of their powers to borough or urban District Councils. Land near towns may be hired at its agricultural value, the landlord being given a right of resumption for building, mining, or industrial purposes. The Board of Agriculture and County Councils may give grants to Co-operative Societies and credit banks, and County Councils may let land to philanthropic associations formed

for the encouragement of small holdings. Land acquired compulsorily may only be let to tenants, but if acquired by agreement it may be either let or sold under the provisions of the Act of 1892.

Experience alone can show how far the establishment of small holdings under the Act will prove an economic success, but it may be said that the conditions at the present time are on the whole very favourable. It is probable that in the first instance the chief use made of the facilities given by the Act will be in the direction of letting accommodation land to those who have already some employment which does not occupy their whole time. The acquisition of small pieces of land greatly increases the prosperity of this class, and from it should develop in future the small holders proper. It seems likely also that the enormous increase in recent years in the demand for such articles as dairy produce, eggs, bacon, poultry, vegetables, and fruit, offers an opportunity to the home producer which can best be taken advantage of by the more intensive culture (see INTENSIVE CULTIVATION) usually practised on small holdings as compared with large farms. The experience of Denmark, where two-thirds of the agricultural land is devoted to field crops, as compared with only one-third in this country, and where every 1000 acres occupies seventy-three persons in agriculture, as compared with thirty-six in this country, is a striking testimony to the advantages of intensive cultivation under a small-holding system. It is true that the growth of co-operative methods has been an important factor in the success of small holdings in Denmark, but it is essentially in small holding countries that co-operation has found an environment favourable to its growth, and there is no reason to doubt that the same process will be repeated if small holdings are established to any considerable extent in this country. It is, of course, impossible that the whole of the food-stuffs now imported from abroad can economically be produced at home, but there is a considerable margin which might be supplied, and as to which the small holder in this country is at no disadvantage as regards soil or climate with his principal competitors abroad, while he has the advantage of proximity to markets.

Many social reformers are keen advocates of small holdings on the ground of the collateral advantages which would accrue to the nation from the establishment of a vigorous and healthy peasant class on the soil in greater numbers than exist at present, and by this means they hope to mitigate the evils of town life and the physical degeneration consequent upon it. But it is evident that it would be fatal to encourage such hopes, unless it can be shown that small holdings will prove not only self-supporting, but also a more profitable and successful system of land cultivation than that which has been customary in this country for the last century.

One of the principal obstacles in the way of the formation of small holdings by private landowners has always been the increased cost of equipment necessary in comparison with what is required for large farms. This difficulty will, however, be largely overcome if the work is undertaken by local authorities with the use of public credit, and experience has shown that the additional rent involved can be well afforded by the small holder in view of the increased productiveness of the land under intensive cultivation.

In estimating the possibility of the successful establishment of small holdings there are a number of considerations which must be borne in mind. The more important conditions of success are suitable soil, favourable climate, accessibility to markets, security of tenure, rights of common grazing, and the possibility of obtaining piece-work employment in the neighbourhood; but none of these are so important as the selection of suitable men, preferably those with a small amount of capital. If the right men can be found, success may be attained in the absence of practically all the other conditions, and even under what appear to be the most unfavourable circumstances.

[See text of *Small Holdings and Allotments Act*, 1907.—*Report of Select Committee*, 1890, (H.C. 223).—*Report of Departmental Committee*, 1906 (Cd. 3277).—Impey, *Three Acres and a Cow*, 1885.—Moore, *Back to the Land*, 1893.—Pratt, *The Organisation of Agriculture*, 1905, and *The Transition in Agriculture*, 1906.—Collings, *Land Reform*, 1906.—Macdonald, *Systems of Land Tenure*, 1906.—Adams, *Garden City and Agriculture*, 1907.—Craigie, article in *R. A. S. E. Journal*, 1906.—Kebbel, *The Agricultural Labourer*, 1907.—Gilbey, *Farms and Small Holdings*, 1907.—Green, *How I work my Small Farm*, 1907.—Masterman and others, *To Colonise England*, 1907.—Jebb, *Small Holdings*, Murray, 1907.—Adams, article in *R. S. S. Journal*, September, 1907.]

F. L. C. F.

SOCIAL CONDITIONS: THE NEED OF TRAINED INQUIRERS INTO. A remarkable illustration of the turn which economic thought in this country is taking towards questions of social interest is shown by the effort of Bishop Gore (the present Bishop of Birmingham), in the meeting of the Convocation of the province of Canterbury in May 1907, to cause social questions to be studied in all the training colleges where men are being prepared for Orders in the Church of England.

(1) "That provision should be made to assist the clergy in the systematic study of social relations with special reference to Christian principles, and of the ethical character of the actual organisation of industrial society, and also to call the attention of the authorities of

the diocesan colleges and the men who are being trained for holy orders to the importance of this subject."

(2) "That provision should be made, where possible, for the instruction of Church workers, and especially of district visitors, in the elements of industrial and sanitary law."

(3) "That more attention should be given in the public teaching of the Church to the exposition of the duty of the Christian to his neighbour, with special reference to the moral character of the actual conditions of industrial life."

Other workers have already been trained for these duties, but the recognition of them by a large and fresh class of educated men will no doubt awaken a larger number of people to a sense of their social responsibilities. These have hitherto been frequently ladies working under the Charity Organisation Society, and have done good service in the slums of our large cities. The Right Hon. Charles Booth's book on the *Labour and Life of the People* shows what needs to be done; and it is a hopeful sign that this work is being continued in other directions. A few years ago such a suggestion would never have been made. The use which such a trained body of men might be if they were instructed in the task they had to undertake would be very considerable. The course they would be put through might be compared to the instructions in "First Aid" which enable the otherwise untrained to assist in simple surgical cases, accidents, and such-like. They would learn what difficulties they might be expected to meet in visiting the working classes generally, and the best way in which they should cope with them and the various organisations from which they might receive assistance. For instance, in dealing with indigent families, by whom gifts of money and clothing are frequently misused in a manner which renders them rapidly valueless. The details are innumerable, from the supply of boots to large families of children walking long distances to school, to suggestions about food, old people past work, cottage accommodation insufficient or insanitary. Thus also they would probably encounter cases in which it might be better that a boy who had committed some youthful offence should be sent to be trained for the navy or merchant service. Suggestions as to the course to be followed might be useful to them.

Again, they might learn the extreme difficulty of giving assistance in such a manner that the position of the recipient may be really improved by the gifts they receive—remembering that no fewer than 42·7 per cent of the people in this country who reached the age of sixty years died paupers. It is a very serious accusation against the social condition of any country that such a state of things should exist. It must either arise from extreme poverty, or from great wastefulness, and probably from the latter quite as much as the former.

As was said in the House of Commons in 1907, when the proposal for old-age pensions was discussed in that House, great care will have to be taken that the proposed measure for relief does not land the poorer part of the population in lower depths than they at present occupy.

The first object of such workers as have been mentioned must be to build up our national life on its social, intellectual, and economic sides. This must be done while strengthening the moral and industrial character. The problem, which is an exceedingly difficult one to solve, can be examined in many ways better in the country than in the town. Those who work there will soon discover that while they will find some of the elements more obvious in the town, they may find the basis of physical comfort even lower in some respects in the country. The people are not without appreciation for the comforts of a home, but the home is often very poorly provided with the ordinary requisites of life, owing to the depressing effects of poverty. The concentration of population has brought with it many difficulties, but the sapping the strength of the rural population, through weeding out the inhabitants who were stronger both in mind and body, has been perhaps more injurious.

Similar subjects were discussed at the July meeting of Convocation (1907), and it may be hoped that a fresh impetus will be given to the intelligent development of social questions, such as the housing problem. The proposed inclusion of medical men in the enquiry is encouraging.

SOCIALISM, PRESENT POSITION OF. Socialism, never a precise term, is now used even more loosely than it was when the first edition of this Dictionary was published. (See SOCIALISM, vol. iii.) It never designated a consistent body of doctrines. It is now applied to very diverse systems. It may mean a disposition of mind more than any set of doctrines, hatred or dislike of the present economic order of things, or desire of change. It is applied to advanced forms of Liberalism, to Communism, or to Anarchism. The points of likeness between the Socialism of Tolstoi, RUSKIN, Mr. Wells, MARX, ENGELS, RODBERTUS, Bebel, or Bernstein, that of the Anarchists (see ANARCHISM) and CHRISTIAN SOCIALISM, the Fabians, the SOCIALISTS OF THE CHAIR, and the Labour Party in Australia and New Zealand, are few. It has become little more than a catch-word to indicate a heterogeneous mass of opinions, sympathies, and desires. The late Arnold TOYNBEE was a socialist in one sense; but, a strong believer in the efficacy of the free association of free men, and averse to all that weakened character or self-reliance, he was opposed to many common forms of Socialism.

The confusion in the use of the term is greater than it was. Until 1848, and for some time after, there were well-known schools of Socialism, whose disciples were more or less faithful to ST. SIMON, OWEN, FOURIER, PROUDHON, and Louis BLANC. For a time Marx exercised a wide influence. *Das Kapital* was the Bible of Socialism; it was what the *Contrat Social* of ROUSSEAU had been to the 18th century. Even in Germany Marx's influence is no longer what it was; and elsewhere it has waned. A peculiarity of the Socialism of to-day is that it has few teachers with faithful disciples.

Another characteristic is that it is taught very much by men of letters, novelists, and playwrights, who do not attempt to be consistent or complete in their teaching. An epigram, a sketch of a character, a situation in a novel, a song, a striking presentment of one side of the question, with indifference to other sides, or ignorance of them, take the place of argument. There is a return to the methods of the writers of the *New Atlantis* and the *City of the Sun* (see BACON; CAMPANELLA; UTOPIAS). Dr. Stein (in *Die Sociale Frage*, p. 333) has pointed out that since socialists attained practical power in the Press and Parliament, Socialism has advanced chiefly by means of epithets and catch-words.

A definition applicable to all forms of modern Socialism is out of the question. A few may be cited to show their diversity. "The organisation and conduct of the necessary industries of the country, and the appropriation of all forms of economics, rent of land and capital by the nation as a whole, through the most suitable public authorities, parochial, municipal, provincial, or central" (Fabian Society, cited by Mr. Keir Hardie). "The aim of Socialism is to organise a collective existence for humanity —to replace the lower, the physically disordered struggle for existence, by the higher, the intelligently ordered, co-operation for existence" (*The Religion of Socialism*, by E. B. Bax, p. 80). "J'appelle socialisme toute tendance ayant pour objet l'égalité réelle entre les hommes" (Faguet, *Le Socialisme avant 1789*, p. 1).—A definition, by the way, equally applicable to communism. "Nous appellerons doctrines socialistes les doctrines qui estiment pouvoir abolir la misère par une réforme du droit" (Andler in his *Origines du Socialisme d'État en Allemagne*, quoted by M. Pareto, ii. 81). Bishop Westcott defined Socialism as "the opposite of Individualism. . . . The method of Socialism is co-operation; the method of Individualism is competition." Socialism may mean "the mitigation of the harshest inequalities in the present distribution of wealth" (Sidgwick's *Elements of Politics*, 152). "Au point de vue philosophique, le socialisme est une réaction de la collectivité contre l'individualisme, un retour au passé" (Le Bon, *Psychologie du Socialisme*, p. 7).

(For other definitions of Socialism see *Democracy versus Socialism*, chap. ii., Max Hirsch (1901), and appendix to Keir Hardie, *From Serfdom to Socialism*. For criticism of the term, Stammler, *Wirtschaft und Recht*, p. 45, and Durkheim, *Revue Philosophique*, 36, p. 506.)

Many modern writers, dissatisfied with the loose use of the word, seek to give it precision. One group of writers would identify it with a movement towards closer union among men; they describe it as no accident, but an inevitable step in the evolution of society; the creation of a new form of society; the result of the growth of altruism and greater sympathy with the poor and weak; a new conception of the objects of the State, each person being regarded as a part of a whole for the good of which he should work. This group is sometimes designated Ethical Socialists. One class of writers habitually describe Socialism as the next stage in the evolution of property. Another group, seeking to connect Socialism with Darwinism and the struggle for existence, see in this movement an illustration of the truth that history is the record of a struggle between classes. It was once the turn of the aristocracy to be supreme. Then it was the turn of the middle class. Now comes the turn of the proletariat, and Socialism is its effort to triumph. In the view of Marx, Socialism is the application to economics of a scientific theory of value; the *Mehrwerth* (surplus value) is the creation of labour; Socialism would give it to its makers. In certain parts of the literature of modern Socialism are attempts, for the most part somewhat vague, to find a biological explanation of it. One of the earliest of such attempts is Schäffle's *Bau und Leben des socialen Körpers*; one of the latest is to be found in Mr. J. R. Macdonald's *Socialism and Society*. The claims of Socialism to be in accordance with modern science are rejected by writers of whom Ziegler is a representative; its methods and results are declared to be opposed to those of science (*Die Naturwissenschaft und die socialdemokratische Theorie*).

One class of so-called scientific socialists contend that the maximum productiveness, which they generally admit was once attainable under a system of private property, is no longer so attainable; that the appropriation of the means of production by private persons may now involve a diminution of the aggregate wealth; that producers who are monopolists may have an interest in limiting production; that there may be a conflict between maximum profit and maximum production. They argue that the interest of the private owner as, for example, to the planting of woods, which requires for maturity many years, or the working of mines by a wasteful generation may be opposed to the permanent interests of society. The great amount of wealth which private property,

it is argued, has produced will make the transition to Socialism easier.

Now, as always, two classes of socialists are to be noted: (*a*) those who rely upon the State as the instrument for carrying out the changes which they desire, which is the prevalent class to-day; (*b*) those who are opposed to State intervention, and who trust to the action of individuals influenced by higher considerations than the desire of gain; the latter class including groups of persons who see in co-operation the spread of the Christian virtues, and a higher conception of citizenship, the way to a reconstruction of society. By a striking paradox the only section of the believers in self-help viewed with favour by the State socialists consists of those most removed from them in doctrine, *i.e.* Anarchists, such as BAKOUNIN, Reclus, Krapotkin, or the late Mr. Auberon Herbert, who regard the State as an evil, or at best an organisation to be endured only for a time.

M. Pareto (*Les Systèmes Socialistes*, i. 110) suggests a classification of socialists according to the degrees to which they admit the existence of private property as justifiable, and he divides them into three classes: (1) those who would forthwith abolish private property. This is a class at present comparatively rare. The socialists who hold with Proudhon "property is theft," or with Saint Just "L'opulence est un délit," are few, if we include only such as would advocate the abolition at once; (2) those who would permit the continuance of private property in the produce of industry, but not in the means of production, which they would "socialise" or put into the hands of the State; (3) those who would not permit private property except as to the means of production (a class which does not avowedly exist, but which includes many who would increase the taxation of wealth to a point only just short of that which would stop all saving); those who mean by Socialism making the rich pay for the growing wants of the poor.

At present the second class is increasing; their object being the acquisition by the State of the chief means or instruments of production. Professor Gonner remarks truly: "It is not too much to assert that its (the State's) position as sole capitalist is of the essence of the Socialist State" (*The Socialist State*, p. 23).

Many who do not go as far as this maintain that land, all means of transport, industries, and production connected with the necessaries of life, should belong to the State.

A large group of persons, loosely described as socialists, seek a change only in regard to one form of property, viz. land. They would "nationalise" the land (see LAND, NATIONALISATION OF); or appropriate the unearned increment (see INCREMENT, THE UNEARNED); or vest in the State compulsory powers of purchase of land to be freely used for public purposes; or subject land to special taxation; or compel the owner to use it in such a manner as to be most to the advantage to the community. One very large group dwell much on the evils attending competition in trade, its wastefulness, incentive to fraud, bad quality of materials, bad workmanship, its cruelty to the weak, etc. They would replace it by association in some form. Often they drop the name of Socialists, and call themselves Collectivists, their creed, COLLECTIVISM (*q.v.*).

Many socialists are interested in only one kind of changes: those which will better the conditions of manual workers, secure to them higher remuneration, shorter hours, better housing, better facilities for education. According to them, labour, being the origin of all value, capital being only stored-up labour, the great bulk of the community consisting of people who labour with their hands, the model State is one in which such reforms are the chief objects of legislation. They desire to see a labour or workmen's State, *Arbeitstaat*, one in which there shall be an actual and complete emancipation of the workman from his position of dependence (Lange, *Arbeiterfrage*, 379); or, as it is sometimes expressed, in which the manual working classes, being the most numerous in the community, should be supreme. To quote a recent manifesto of the Independent Labour Party, the objects in view should be "abolition of indirect taxation and the gradual transference of all public burdens on to unearned incomes with a view to their ultimate extinction"; a maximum working day; a minimum wage; State pensions; free education.

While certain new groups of socialists have been formed, other groups have disappeared, or have become less powerful. Few now advocate the total and immediate abolition of private property; even most of those who theoretically condemn it admit that at present this is out of the question. M. Jaurés, for example, states that he contemplates the survival of private property: "Je suis convaincu que dans l'évolution revolutionnaire qui nous conduira au communisme, la propriété collectiviste, la propriété industrielle, le communisme seront longtemps juxtaposés" (*Études Socialistes*, xxiv.). M. Millerand (*Le Socialisme réformiste français*, 1903), who advocates the immediate appropriation of all the means of production, holds that there should be no appropriation without indemnity. M. Malon, the author of *Socialisme Intégral*, is the advocate of the "théorie possibiliste," as distinguished from "collectivisme intransigeant" of M. Guesde, that is, the slow and gradual acquisition of public services by the communes and the State. Many strongly deprecate "catastrophe" plans, or "catastrophes libératrices" (Jaurés, p. lxvii.). I may quote on this point the observation of Rodbertus, who, after discussing his own socialist

system, adds, "I am very far from proposing such a system as suitable for the present." . . . "I certainly do not believe in the absolute necessity of property in land and capital, but I believe in its relative necessity, that is, so far as the present is concerned." A modern writer of great influence makes a still further concession: "Socialists do not object to property, they are not opposed to private property, and are therefore not opposed to inheritance" (*Socialism*, by J. Ramsay Macdonald, M.P., p. 105). But the ultimate solution in the view of most socialists is the abolition of private property.

The most common proposal is to establish collective ownership in place of private. This is to be done either by expropriation of the present owners or by establishing State undertakings. To accomplish this, taxation is to be placed on a socialist basis; the object will be not merely to raise the largest amount of revenue; one aim will be to redress the inequalities of wealth; to tax the rich or well-to-do; to abolish indirect taxes, and to substitute a graduated income tax. The revenue and credit of the State will be employed not merely to provide for the current expenses of the State, but enable it to take over and work many industries. Beginning with the acquisition of water and gas and tramways, it would push on and acquire railways, land, canals; it would set up factories which would effectually compete with, and in the end destroy, private industries. The serious objections to the State becoming manufacturer do not apply, it is said, to municipalities entering into the field and supplying cheaply the chief necessaries of life. The examples of London, Glasgow, and Paris are cited as instances of successful enterprises; little is generally said of the failure or costliness of some of such experiments, the corruption, jobbery, or other evils which may be connected with them, and the multitude of officials who must be appointed to carry them out.

How far this process is to go is a point upon which socialists greatly differ. Some think that private ownership will ultimately disappear. Mr. Keir Hardie, for example, pointing to the advance made in collective ownership, says: "There is no logical halting-place short of complete State Socialism" (p. 16). Some hold that the State should take over the industries which "conform to the law of increasing returns," retaining for private enterprise those which conform to the law of diminishing returns. Others think that the ultimate province of collective and of private ownership cannot be foretold, but is a matter for experiment. Nor is there any agreement as to the mode in which collective property is to be managed. The view now prevalent is that it should be administered by municipalities or other local authorities. But this is not universally accepted. According to Eugen Dühring, small economic associations, "kleine oekonömische Republiken," are to replace the large undertakings; every association being free to buy and sell with every other, but bound to permit its members to share in its benefits.

There is a distinction between socialists who, in accordance with ancient models, would recast many institutions, including marriage and the family, and those who seek only changes in the production and distribution of wealth and the relation of Capital and Labour, that is, the so-called economic socialists. Both varieties are now to be found; some strenuously asserting their desire to preserve marriage; others declaring that Socialism repudiates the private ownership of the head of the family as completely as it repudiates any other sort of private ownership. It would be inaccurate to identify Socialism with a desire to break up the family, or to revolutionise marriage; it would be equally wrong to ignore those who, seeing in these institutions the strength of private property, attack all of them and advocate freedom from "sex ties."

Of one form of Socialism much has been heard of late. There is a demand for what is vaguely called the "socialisation of Law," the legal protection of the economically weak; "the conscious subordination of the interests of the individual to those of a larger common whole, which, gradually extending, will finally include the whole of humanity" (*Die Sociale Frage im Lichte der Philosophie*, Ludwig Stein, 1897). "Rechtsocialismus," says one of its most capable exponents, "means the largest amount of freedom with the greatest possible economic and legal equity" (Stein, 603); "Unter Socialisirung des Rechts verstehen wir den rechtlichen Schutz der wirthschaftlich Schwachen" (Stein, 607). Those who advocate the "socialisation of law" point to the Workmen's Compensation Acts, the Employers' Liability Acts, the Irish Land Acts, the many instances in which freedom of contract has of late been set aside, as recognition of their principle that true freedom and equality can only be got if the State ensures to every one an opportunity of doing that which is permanently best for himself. True freedom for the weak is attainable only under the protection of the State; protection against abuses of physical or economic strength.

Any analysis of the causes of modern Socialism, that is, of many different things bearing one name, must be imperfect. Some of the conditions of modern industry have, no doubt, favoured the growth of Socialism. There is the contrast between enormous wealth and poverty; the concentration of wealth in few hands, which is visible; its diffusion among many is apt to be forgotten. There is the existence of evils which competition has not effaced, and which in some instances it has increased. There is the successful operation of large con-

cerns by Joint Stock Companies, which seem to show great possibilities for collectivism. The root in certain minds may be envy. Socialism may also express the impatience of the weaklings, the thriftless, those who are ambitious but incapable, at the success of those better equipped. With not a few it is the outcome of pity for the poor, sympathy with their lot, and a sense that the present order produces results which offend the sense of justice. Professor Nitti, an exponent of Roman Catholic Socialism, sees in modern forms of Socialism the result of the undermining and decay of religious belief in the masses. It has been asked, "What wonder if, robbed of the Gospel of Christ, they embrace that of Ruskin."

Undoubtedly Socialism has spread largely by reason of its attraction to highly emotional natures which once threw themselves into religious movements. These are socialists through their feelings; they believe in what they desire.

A further cause of its spread is the fact that it is rarely examined in a judicial spirit; advocates and opponents rely upon exaggerations which do not bear close scrutiny. Chief among the causes of the spread of Socialism is a disposition to ignore or make little of the real objections to it. Rarely is there a frank discussion of the difficulties in its way. There is the recurring fallacy that certain evils accompanying the present economic order must disappear when it disappears. There is the assumption that because poverty co-exists with private property, the abolition of the latter will mean the abolition of the former. Disease, passion, thriftlessness, idleness, intemperance, weakness, physical and mental, will continue to exist; it is forgotten that they will bring their usual results. There is, too, the fallacy that the present stimulus to exertion will continue if some of the present motives are withdrawn or weakened. It is assumed that if the right to work exists, if subsistence is assured, if old-age pensions are provided, if there need be no dread of poverty and no hope of great wealth, there will *not* be a slowing down of the productive activities. If inheritance is not to be permitted (as certain socialists contend), one stimulus will be gone; if it is permitted, private property will reappear. Socialistic systems connected with religion attempted to guard against these dangers; they are not met by modern systems which speak almost uniformly of rights and rarely of duties, which appeal to self-interest, and which, destroying some of the present most potent motives for exertion, do not substitute others equally widespread and strong. The shirker, the idler, the weakling will have their own way unless they are compelled to work. The right to compel to work according as the State thinks best seems the necessary complement of the right to work.

Nor do socialists make it clear that STATE SOCIALISM is consistent with freedom of action. The description by Prince Bülow of the socialistic State as a prison State, *Zuchthausstaat*, refers to a weakness in almost all socialistic systems. They almost all assume that economic relations are to be regulated by some authority. Officials are to be substituted for "masters" or "employers," and these officials, clerks, and others, will act as they think fit, with the whole power of the State at their command. With them, in the last resort, will rest the remuneration of the various kinds of labour and the assignment to each person of his work. Socialism may mean bureaucracy writ large; bureaucracy, according to some systems, on a larger scale than any despot has ever attempted to carry out. Whether competition is to be permitted between different countries; whether races content with lower remuneration than highly civilised Europeans are to share in the benefits of Socialism; how a spread of routine and dislike of changes characteristic of bureaucracy is to be avoided under Socialism, is not made clear. It may mean immobility as well as bureaucracy. Collectivism has invented and can invent nothing. It can be, and often has been, obstructive. Many ignore the causes deep-seated in human nature which have brought about private property. Enormous difficulties of detail are slurred over in the vague expression, "Society will be organised."

Many who advocate Socialism or Collectivism are ignorant of the history of society, and are unaware that some of their so-called novelties are a revival of methods and systems which existed in barbarous times.

Among the causes of the growth of Socialism have been unreasonable optimism and overconfidence that free competition between men and a policy of *laissez faire* on the part of the State, would bring about the best possible results. Exaggerations of this kind were followed by disillusion and disappointment, and call for an opposite course of action. M. Faguet sees in Socialism, "Une idée fausse en réaction contre une idée fausse" (Faguet, 363), the idea that the aim of civilisation is the continual increase of general wealth.

Socialism has spread also by reason of the failure of attempts to formulate precise limits as to the functions of the State. There is a growing disposition to believe that this can be determined only by experiments, and that the results will vary in different countries and at different times. Accordingly, in almost all countries the functions of the State are being extended. History tells of societies in which the modes of distribution have differed much from ours. There may be in the future great variety as there has been in the past. In many countries a great development of the powers of the State as to national defence and public order,

including public hygiene and public services and utilities, has taken place. In several countries there is great expansion of their powers in the direction of what is vaguely termed "police"; under cover of this the Supreme Court of the United States, for example, has refused to declare unconstitutional some socialist legislation. There is, too, a tendency to ignore good which the socialist movement may have done. It may have helped to correct some of the fallacies into which the older economists fell. (See "The Economic Lessons of Socialism," *Economic Journal*, 1905, p. 337.) It has emphasised the human, as distinct from the mechanical factors in society. It has corrected the errors incident to regarding labour as an ordinary commodity. Some writers maintain that, thanks to Socialism, capitalists themselves have adopted part of its teaching; that there is now a new recognition of the duties of the employer and of the fact that capital and labour are engaged in a common enterprise, and that industrial liberty is no solution of economic problems. "Already we have begun to pass from the era of individual industrialism into the era of fraternal industrialism."[1]

Many attempts are made to identify Socialism with the essence of Christianity. The Christian Socialist movement begun by MAURICE, KINGSLEY, LUDLOW, Hughes, and NEALE has been continued by writers and workers who seek in the New Testament the earliest and best exposition of Socialism. Bishop Westcott, Bishop Gore, the Rev. Stewart Headlam, and the Rev. R. J. Campbell, for example, see in it a revival of primitive Christianity; "a too tardy rediscovery of the essential teaching of Jesus Christ," to quote Dr. Lyman Abbott. "The nineteenth century," said the Bishop of Stepney, "was a period of individualism and competition, the twentieth century will take its place as the era of socialism and co-operation." Christian Socialism dwells upon certain sayings in the gospel; it is apt to lose sight of the individualist side of Christianity.

The forms of socialism in each country vary, though they tend more and more to approximate. The International Congresses (*e.g.* Marseilles, 1892; Zurich, 1893; London, 1896; Amsterdam, 1904; Stuttgart, 1907) have tended to efface differences. Sombart (*Sozialismus und soziale Bewegung im 19ten Jahrhundert*) describes the movement in England as non-political and purely economical; in France as revolutionary; in Germany, legal, parliamentary, political. Such descriptions, never very correct, are less apt than they were. In England the chief socialist organisations are: The Social Democratic Federation, founded about 1880; the Independent Labour Party, founded about 1892; the Fabian Society, and the Christian Social Union. Attempts have been made to convert the Trade Union Congresses to Socialism. It is enough to say that the Trade Unions, since the Congress of 1899, no longer stand aloof from the socialist movements; the majority of votes obtained at the recent Labour Congress at Hull shows a close approximation.

In France are many varieties of Socialism, some of which would be in England described as Liberalism. Dr. Brousse, for a time the leader of "possibilistes," M. Jaurés and M. Millerand, who took office under M. Waldeck Rousseau, are sharply distinguished from M. Guesde and other irreconcilables. The working men's Syndicates, legalised by M. Waldeck Rousseau, have been powerful agencies of Socialism.

In Germany the influence of the writings of Lassalle and Marx has greatly decreased. Bebel is still the official leader. But younger socialists find in his teaching no satisfactory theoretical basis. Marx's theory of the *Mehrwerth* is discarded not merely by Bernstein (who has subjected it to a destructive criticism) but by most of the younger socialists. The difficulties in the way of the acceptance of his theory, which he promised in the first volume of *Capital* to explain, became clearer in the posthumous volume published by Engels, and have been exposed by several critics, notably by Professor Böhm-Bawerk. The *Katheder-socialisten* are not the force which they were, but occupying as they do several of the chairs in universities, they influence greatly the educated classes. The Government efforts to check Socialism in the shape of such measures as the Insurance Laws (the Sick Insurance Act 1883, the Accident Law 1884, the Invalid and Old-Age Insurance Law 1889) have indirectly helped its growth.

The socialists in our colonies are pre-eminently "socialists without doctrines." They desire the State to actively intervene in industries; to attempt to regulate wages; to repress sweating; to limit the hours of work; to settle labour disputes; to encourage "collective contracts"; to prevent the intrusion of low-priced labour.

"The practical objects of the labour party are not so much socialist as social democratic. They look towards Collectivism, but recognise wages, profits, and the conditions of capitalist production as matters to be accepted in present legislation. . . . There is little social idealism among the rank and file of the working class. They are mostly seeking immediate and concrete results, and, so far as any directive purpose on their part is concerned, it is merely an accident that the policy thus determined tends towards Socialism." "The farmers are steady partisans of freehold tenures and the sale of the State domain to settlers" (*The Labour Movement in Australia* (1907), Victor S. Clark, 118, 119, 283).

Some of the characteristics of the present

[1] *The Industrial Problem*, by Lyman Abbott (1905), p. 52.

socialistic movement may be summed up thus: proneness to exaggeration; one-sided discussion on the part of its friends and adversaries; refusal to believe that Individualism and Socialism can be complementary or that compromise between them is possible; a general assumption contrary to experience, that the future economic condition and organisation will be on the whole uniform, and can be predicted. Socialists are for the most part pessimists in their judgments as to the past and optimists in their expectations. Individualists are optimists as to the past, pessimists as to the future. The former dwell upon the evils which private property and other economic institutions, creations of the past, have left; the latter extol the wealth and civilisation which are the products of these institutions.

Both are alike in this respect; with them both laws and environment count for almost everything; human nature, scarcely changed, it may be, by laws and environment, counts for little. In this they may both be wrong. I note one other characteristic: the movement is advanced and spread very much as religions have been; there are appeals to reason, but these are sometimes weakest where the convictions produced are strongest. The real impulse comes from emotions, often unavowed, which Socialism arouses.

It may, and to-day does, mean very diverse things—an outbreak of mere predatory instincts; or an earnest, disinterested desire for a better social order; or a belief that the present economical conditions could by proper regulation be improved. It may originate in some of the best or worst impulses of human nature.

[*Bibliography.*—It would be totally impossible to give even a faint idea of the enormous literature of modern Socialism. Hundreds of books and pamphlets (to say nothing of articles in newspapers and magazines), dealing with all aspects of Socialism, are annually published. Here are set down the titles of only a few:—

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SPENCER, HERBERT (1820-1903), the son of a schoolmaster at Derby, as a child was more fond of games and rural pursuits than lessons. From the age of thirteen to sixteen he was taught by his uncle, the Rev. Thomas Spencer (1796-1853), curate of Hinton Charterhouse, a broad-minded man, the first Church of England clergyman who publicly engaged in the agitation for the Repeal of the Corn Laws, and a practical reformer in poor law matters. The classics did not attract young Spencer, but he made great progress in mathematics. After being occupied in desultory study and teaching at home he accepted an engagement on the

engineering staff of the constructor of the London and Birmingham Railway. In 1840 he became the private secretary of Captain Moorsom, then laying the Birmingham and Gloucester Railway, and superintended engine constructing and testing. He invented the velocimeter for gauging the speed of locomotives, and contributed to the *Civil Engineer and Architect's Journal*. It was in 1840 that the reading of Lyell's *Principles of Geology* led him to the first conception of the system of philosophy to which he devoted his life. In 1841 he returned to Derby, and spent two years in study and devising improvements in watch-making and typefounding and in the glyptograph. He reported on the great flood at Derby in 1842, and contributed letters to the *Nonconformist*, "On the proper sphere of Government," which appeared as a pamphlet in 1843. One communication dealt with commercial restrictions. For a short time he was sub-editor of the *Pilot* in 1844, and then returned to railway engineering, which he abandoned in 1846 and occupied himself with inventions. He wrote in the *Westminster Review* and the *Philosophical Magazine*, and in 1848 was appointed sub-editor of the *Economist*, an office he held for five years. In 1850 appeared the first edition of his *Social Statics; or, the Conditions essential to Human Happiness specified, and the first of them developed*. The primary inception of the general doctrine of evolution was in an article on "Progress; its Law and Cause," published in the *Westminster Review* in 1855, in which year was issued his *Principles of Psychology*. It was in 1857 that the ideas he afterwards elaborated first became crystallised, and in 1860 he circulated the programme carried out in his works on the Synthetic Philosophy (1862-1896), commencing with *First Principles*, followed by *Principles of Biology*, 2 vols., *Psychology*, 2 vols., *Sociology*, 3 vols., and *Ethics*, 2 vols. Spencer's writings on sociological subjects are those mentioned below and *The Study of Sociology* (1873). He also printed eight folio volumes of *Descriptive Sociology* (English, Ancient American, Lowest, African, Asiatic, and American races, Hebrews, and French), consisting of facts collected and abstracted by several assistants.

The last twenty years of Spencer's work were devoted to the completion and revision of the volumes of his *Philosophy*, with intervals of exciting controversy, chiefly anti-socialistic. At an early date he read Adam Smith, with whose ethics he had many points of contact. "Justice and beneficence have a common root," sympathy (*Social Statics*, ch. v. § 5). "There exists in us a mental mechanism by which the essential prerequisite to greatest happiness is recognised and enforced," and that is the moral sense (*ib.* ch. v. § 8). Legislation cannot create moral force, the essential function of the state is to maintain the law of equal freedom, to maintain men's rights, and to prevent aggression. "Protected trades have afforded many proofs of the impolicy of injustice" (*Introd.* p. 61). Spencer points out the encroaching of government in the regulation of commerce, religious establishments, poor laws, national education, colonisation, sanitary supervision, currency, and postal arrangements. "The injunctions of the moral law as now interpreted coincide with and anticipate those of political economy. Political economy teaches that restrictions upon commerce are detrimental: the moral law denounces them as wrong" (ch. xxiii.). Other instances of the coincidence of the moral law and the teaching of political economy are: the loss entailed by a forced trade with Colonies (ch. xxvii.); the condemnation of interference with food markets; the infringement of rights in making penalties upon usury; the law of equal freedom forbids all attempt to restrict the use of machinery as well as artificial regulation of wages and prices; direct taxation is the only kind of taxation against which the law of equal freedom does not protest; the harm of tampering with currency and of endeavouring to benefit one occupation at the expense of others; legislative interference with manufacturing processes, etc. "The laboured arguments of Adam Smith and his successors are forestalled, and for practical purposes made needless, by the simplest deductions of fundamental morality" (ch. xxxi. § 4). "The so-called moral law is in reality the law of complete life" (*ib.* § 6). This view is reproduced in *Data of Ethics*. "Not for the human race only, but for every race, there are laws of right living. . . . The leading traits of a code under which complete living through voluntary co-operation is secured, may be simply stated. The fundamental requirement is that the life-sustaining actions of each shall severally bring him the amounts and kinds of advantage naturally achieved by them; and this implies, firstly, that he shall suffer no direct aggressions on his person or property, and, secondly, that he shall suffer no indirect aggressions by breach of contract" (pp. 132, 149). With the decline of militancy and the rise of industrialism there have gradually arisen "multitudinous voluntary associations among citizens for discharging numerous kinds of functions"; "one result is that there can now be achieved without governmental power various ends which in early days governmental power alone could achieve" (*Principles of Ethics*, § 368). "All-embracing state-functions characterise a low social type; and progress to a higher type is marked by relinquishments of functions" (*ib.* § 369).

"It results that to recognise and enforce the rights of individuals is at the same time to recognise and enforce the conditions of a normal social life. There is one vital requirement for

both" (*Man versus the State*, p. 102). "The function of liberalism in the past was that of putting a limit to the powers of kings. The function of true liberalism in the future will be that of putting a limit to the powers of parliaments" (*ib.* p. 107). Free trade is advocated in chs. xv. and xvi., and direct taxation at the end of ch. xxiv. of *Justice* (*Principles of Ethics*, vol. ii.). "The histories of all nations are alike in exhibiting the enormous evils that have been produced by legislation guided merely by 'the merits of the case'" (*ib.* pp. 249-50). As to the land question, Spencer believes that, "the aggregate of men forming the community are the supreme owners of the land," yet, "a fuller consideration of the matter has led me to the conclusion that individual ownership, subject to state-suzerainty, should be maintained." As to state ownership, "the vices of officialism would inevitably entail immense evils" (*ib.* vol. ii. App. p. 444). "From the outset the growth of revenue has, like that growth of the political headship which it accompanies, been directly or indirectly a result of war" (*Political Institutions*, § 546). "With the repression of militant activities and decay of militant organisations, will come amelioration of political institutions as of all other institutions" (§ 582).

Spencer always opposed the compulsory introduction of the metric system, and directed in his will that his pamphlet *Against the Metric System* should be circulated among peers and members of parliament should a bill be introduced.

He distinguishes between militant and industrial co-operation and between voluntary and compulsory co-operation (*Principles of Sociology*, § 833, etc.). In dealing with socialism (§ 840, etc.) he points out that the chief question at issue concerns the mode of regulating labour.

Most of Spencer's fundamental economic views are to be found in his early *Essays* (vol. iii.). In *Railway Morals and Railway Policy* (1854) he criticises railway finance and management, especially the practice of companies taking up illegitimate businesses (*e.g.* docks, hotels, steam packets), and the unnecessary increase of new lines; there should have been formed "running companies" separate from the companies owning the roads. In *The Morals of Trade* (1859) he points out that "men who deal in bales and tons differ but little in morality from men who deal in yards and pounds"; as to douceurs and bribes, the frauds of wholesale houses, manufacturers, banking delinquencies—"are these evils growing worse?" He answers partly Yes and partly No. The morals of trade are so bad because of "the indiscriminate admiration of wealth." He forcibly drew attention to *State Tamperings with Money and Banks* (1858). "The progressive accumulation and depreciation of promises to pay and the commercial disasters" of 1814-15-16 "were state-produced evils." The Bank Act of 1844 is "this remnant of protectionism." In *Specialized Administration* (1871) he says: "The evils that have arisen from the positively regulative action of the State on banks are too multitudinous to be here enumerated."

H. R. T.

STRINGENCY IN THE MONEY MARKET, 1906-1907. In continuation of the article on this subject in the third volume of the *Dictionary*, it is advisable to record the instances of a state of stringency which occurred in the autumns of 1906-1907. On neither occasion was there any special cause for anxiety as to the position of any bank or great mercantile house, but the stringency was caused by the extraordinary movements in the market, and of which it will be interesting to give a sketch. The rough history is as follows:—

The movements of gold bought by, and taken from the Bank up to the end of October 1906 had very fairly balanced each other, and the applications for capital on account of new loans and new capitals during the year had not been unusually large,—considerably smaller, indeed, than they had been the preceding year. The bank rate had stood at the low point of 3½ per cent from 30th June to 13th September, when it moved upwards to 4 per cent. A rise of this description in the autumn is by no means unusual, and the occurrence was not a surprise to the City, nor did a further movement upwards to 5 per cent on 11th October really cause alarm, though we had not experienced a 5 per cent rate since 1901.

It was known that London had financed commercial and speculative activity in New York to some considerable extent, and rumour exaggerated the amount. The reserve of the Bank dropped fully two millions between the 3rd and the 10th, but the proportion of the reserve to the liabilities was 35½ per cent, and while there was no definite cause for anxiety when the rate, after being placed at 5 per cent on Thursday the 11th, was raised to 6 per cent on Friday the 19th, the Thursday, the usual day for an alteration of the rate, having passed by without any change being made, the market began to be alarmed.

The rate continued at 6 per cent till 17th January 1907, a period of ninety days. This of itself was very unusual. During more than twenty-five years, from January 1882 to January 1907, the rate had only been 6 per cent five times, and then only for 24 days in 1882, fifty-two in 1889-90, twenty-seven in 1890, and forty-two in 1899-1900.

A similar condition of the money market extended over a considerable district and space of time. At Berlin the rate had been raised to 6 per cent on the 10th October 1906, and to 7 per cent on 18th December, returning again to 6 per cent in January; New York marked 6 per cent to 6½ per cent on the 27th October. The Bank

of Belgium moved to 4½ per cent on the 25th October, and the Bank of Amsterdam to 5 per cent on the 11th. Meanwhile the Bank of France remained at 3 per cent, and did not alter till between 16th and 23rd March, raising its rate then only to 3½ per cent, and lowering it again to 3 per cent in April.

The immediate cause of the 6 per cent rate was the drain of gold from the Bank which, between 20th September and 20th October, exceeded £5,600,000 against about £960,000 received. A considerable part of this, nearly £4,500,000, went to Egypt, but it was only on account of the ordinary business demands for that country.

The help given by the Bank of France was of great service in assisting matters to return to a satisfactory position. The description of the action of that Bank in its report for 1906 states what occurred so clearly that we reproduce it here. The stringency passed off gradually without having had any serious effect on our trade, though in many quarters the high rate was very unwelcome.

The Report says: "The rate of discount rose rapidly, it rose to 6 per cent in London, without this increase being able to prevent the outward movement of gold sufficiently, and there was reason to fear that the monetary tension, if it could not be relieved, would recoil on France, and compel us, in our turn, to raise our rate.

"In this position we had a double duty: we had, on the one hand, to secure to our market, both for our internal and our foreign trade, the resources necessary to prevent a rise in the exchange which would inevitably have recoiled on France; we had, on the other hand, to discourage the speculation which always follows in the train of great business activity, and which causes, if not stopped in time, a risk of ending in a crisis. The Bank of France has fulfilled these two duties as completely as possible.

"Adopting a monetary policy which has, up to the present time, been justified by events, we have, by discounting English paper, supplied the London market with the amount required to enable it to meet these difficulties.

"We thus only issued our gold voluntarily, and with the conviction that we directed it to those points where its action would be efficacious, where it was of importance to us, from the point of view of the trade of France, to prevent the possibility of a crisis.

"The Bank has thus fulfilled its primary duty, which is to regulate the rate of discount on the home market and to keep it low; it has obtained this result by various methods, but in particular and above all by a new form of procedure which, moreover, has met with general approval; the extent of its resources enabled it to limit its action not to the French market alone. The difficulties came from foreign countries; it is to the very place where they began, to the London market, that the action of the Bank of France extended to make arrangements to secure that the rate of discount in Paris should remain both steady and low. This extension of the influence of the Bank of France can only be regarded with approval, since it provides a new proof of the development of the financial power of the country and the wide circle to which it extends."

It is interesting to compare what occurred in England and in France. In England an export of some eight or nine millions sterling of specie in all caused a considerable enhancement of the bank rate, while a rather larger export from France left the rate in that country undisturbed at 3 per cent.

What occurred in 1906 and 1907 appears to mark distinctly the fact that the specie reserves in London are not sufficiently large to meet the present requirements of the money market. The number of countries in which a gold standard exists increases, and the greater wealth of those countries causes their demands to be larger. The inference is obvious that a more considerable specie reserve is required in the only open market for gold.

A somewhat similar, but more extreme period of stringency took place in the autumn and early winter months of 1907. The rates charged by the Bank of England in both years show this very clearly.

Rates charged by the Bank of England, 1906-7.

1906.		1907.	
1st Jan. to 5th April	4	1st Jan. to 17th Jan.	6
,, 5th ,,	3½	,, 17th ,,	5
,, 3rd May	4	,, 11th April	4½
,, 21st June	3½	,, 25th ,,	4
,, 13th Sept.	4	,, 15th Aug.	4½
,, 11th Oct.	5	,, 31st Oct.	5½
,, 19th ,,	6	,, 4th Nov.	6
		,, 7th ,,	7

Average rate for 1906, £4:5:3. Average for 1907, £4:18:6. The average rate from 1845 to 1906 inclusive had been no more than £3:12:8.

In 1907, as in the previous year, the requirements of specie mainly arose from New York, accentuated by the extremely awkward methods of the Treasury of the United States (see TREASURY OF THE UNITED STATES), joined with a certain amount of over-speculation among the Banks of that country. The rates in London were even more severe than in 1906, the Bank of England having charged 7 per cent from 7th November 1907 to 2nd January 1908, a period of fifty-six days; 7 per cent, it should be observed, had not been charged by the Bank since 1873, and the possibility of so high a charge had almost passed out of the minds of business people. There had been no speculation in the United Kingdom or over-activity in business which in the slightest degree justified so high a charge as far as the requirements of the country were concerned. We can only reiterate what was said in reference to the period of stringency in 1906, that the specie reserves of the United Kingdom are not sufficiently large to meet demands of this nature, to which recent experience shows that we are increasingly liable. Similar assistance, it may be mentioned, to that afforded by the Bank of France in 1906 was

also rendered in 1907. While we commemorate thus our obligations to Paris, we have to ask whether help of this character can be continually afforded and real independence maintained. We are attempting, in fact, to carry on our banking system with arrangements sufficient for our domestic needs, but inadequate for the requirements of a country, which besides its own immediate business, undertakes the duties of the Clearing House of the World (see STRINGENCY IN THE MONEY MARKET, vol. iii.).

STYLE OR TRADE NAME. Some slight provision for the registration of the trade name of partnerships is made by the Limited Partnerships Act 1907 (see PARTNERSHIP; LIMITED PARTNERSHIPS ACT 1907, Appendix). To obtain the benefit of limited liability for the limited partners, every limited partnership formed under the Act is required to register certain particulars with the Registrar of joint stock companies. These particulars include the firm name and the names of all the partners, whether general or limited, and due notice must be given of any alteration in such particulars. The Act does not extend to any partnerships other than limited partnerships, nor has any provision been made (except in the case of money-lenders by the Money-lenders Act 1900) for the registration of trade names generally.

A. A. U.

TARIFF REFORM MOVEMENT, THE, is a movement for a reform of the fiscal practice of the United Kingdom, for the purpose, primarily, of encouraging the growth of trade between Great Britain and the provinces of the empire, by means of a customs tariff giving preferential treatment to imports from British India and the Colonies. Although the project of imperial preferential trading had many earlier advocates, it is convenient to date the inception of the movement from a speech delivered at Birmingham on May 15, 1903, by Mr. Joseph Chamberlain, then Colonial Secretary. Discussions generally favourable to preference had taken place at inter-colonial conferences in 1887, 1894, and 1897. In 1897 Canada allowed a reduction of 25 per cent (enlarged in 1900 to 33⅓ per cent) of the normal duty on dutiable goods in favour of imports produced or manufactured in the United Kingdom; and thenceforward a rapid and continuous increase was observed in the volume of British exports to Canada, which had been steadily decreasing for some years. The value of British goods imported into Canada, according to the Canadian returns, fell, before preference, from £13,800,000 in the year ending June 30, 1873, to £10,400,000 (1883), £8,600,000 (1893), £5,800,000 (1897), and rose annually after preference as follows:—£6,600,000; £7,400,000; £9,000,000; £8,600,000; £9,800,000; £11,800,000; £12,400,000; £12,000,000 (1898 to 1905), converting the $ as 5=£1. It is true that Canadian imports from countries not enjoying preference have simultaneously increased; but the coincidence of the sudden change from a downward to an upward tendency in British imports with the grant of preference cannot be accidental. Mr. Chamberlain had frequently spoken favourably of preferential trading. As early as 1896, in the second year of his tenure of the Colonial office, he had been censured at the jubilee dinner of the Cobden Club for "giving a conditional support to the demand that England should renounce the freedom of her trade in order to differentiate in favour of the Colonies." In July 1902, Mr. Chamberlain presided over a conference of the colonial premiers visiting London on the occasion of the coronation of King Edward VII. The conference unanimously adopted five resolutions, declaring (1) that preferential trading between the United Kingdom and the King's dominions beyond the seas would facilitate commercial intercourse and strengthen the empire; (2) that a general system of free trade within the empire was not immediately practicable; (3) that it was desirable that Colonies should give substantial preference to products and manufactures of the United Kingdom; (4) urging on the Imperial Government the expediency of granting preference to products and manufactures of the Colonies, by exemption from or reduction of duties then or thereafter imposed; and (5) pledging the premiers to ask their respective Governments to take measures necessary to give effect to the principle of the resolutions. In the speech of May 15, 1903, Mr Chamberlain declared himself in favour of assent to the colonial proposals, and also of resuming the power of negotiation, and if necessary of retaliation, whenever British interests or the relations between Britain and her Colonies were threatened. In this there was a reference to the penal tariff imposed by Germany on Canadian merchandise by way of retaliation for the preference granted in Canada to British imports. Mr. Chamberlain's views were repudiated by some of his colleagues in the Cabinet; and on 16th September he secured freedom by resigning office. In the autumn of the same year he spoke at Glasgow (7th October), Greenock (8th October), Newcastle (20th October), Tynemouth (21st October), Liverpool (27th and 28th October) and Birmingham (4th November). In these speeches, which were published under the title of "Imperial Union and Tariff Reform," he completed the argument in support of his project, except as regards its relation to the agricultural industry, with which he dealt at Welbeck and Luton (4th August and 5th October, 1904). The speeches named are still the chief document of

the case for tariff reform; in many other speeches new illustrations were adduced, but no substantial addition made to the argument.

The details of the proposed reform are as follows:—(1) *The Preferential Tariff.*—Since imports from the Colonies consist mainly of gold, raw materials, and food-stuffs, and as the inexpediency of levying duties on raw materials is not disputed, import duties must be imposed on foreign food-stuffs if adequate recompense is to be offered to the Colonies for substantial favour to British manufactures. In a sketch plan submitted at Glasgow, Mr. Chamberlain proposed a duty of 2s. a quarter, or 6d. a cwt., on foreign grain, except maize, with higher duties, not specified, on flour and meal, and a duty of 5 per cent *ad valorem* on foreign dairy produce and meat, except bacon, the products of British possessions giving preference being admitted duty free. A preference, unspecified, was also suggested on colonial wine and fruit. To compensate consumers for these duties it was proposed to remit three-fourths of the existing duties on tea, coffee, and cocoa, and one-half of the sugar duty. A calculation was offered showing that, even on the assumption, disputed by tariff reformers, that the selling prices of the food newly made dutiable were raised by the whole amount of the duties, the effect of the remissions would at least counterbalance that of the new duties in the weekly expenditure of working men. (2) *The General Tariff.*—It is proposed to levy on manufactured goods imported from foreign countries a duty averaging 10 per cent *ad valorem*, but varying according to the amount of labour and wages represented in the cost price. The purposes of the general tariff are, (*a*) to make good the loss of revenue incurred by the proposed reduction of the taxation of food, and (*b*) to put the manufacturer at home on more equal terms with foreign competitors when competition is unfair. Competition is held to be unfair when the competing industry is helped by bounties, subsidies, or indirect aids from the State; or when the cost of British production is raised by legislation for the protection of workmen; or when surplus products are sold in the British market at less than the full cost of production, the capital and establishment charges of the industry having been covered by sales in the protected home market. The general tariff is also recommended (*c*) for purely fiscal reasons as a means of broadening the basis of taxation; (*d*) many tariff reformers also look to it to provide the means of expensive social reforms. (3) *Retaliation.*—The general tariff is also to supply the means of negotiation for more favourable treatment of British goods, being raised in retaliation for hostile treatment, or lowered in return for valuable concessions.

It is arguable that the preferential tariff, and hardly to be disputed that the general tariff, fall within some current definitions of protection. The case against the reform, therefore, rests mainly on the reasons against protective tariffs which were worked out by the Ricardian economists, and are repeated in most English text-books of political economy. On the political side it is contended that negotiations for exchange of preference, so far from promoting imperial unity, would provoke jealousy and disputation, and introduce a sordid element into imperial loyalty. Some stress is also laid on the consideration that the policy would involve the sacrifice of advantages enjoyed under most-favoured-nation clauses.

Tariff reformers, while refusing to admit that they are committed to the full doctrine of protection, suggest in defence reasons for distrusting or for qualifying many of the positions laid down in support of the orthodox or free-trade theory of fiscal policy. They take exception to the unqualified statement of the doctrine that import duties fall wholly or mainly on the purchaser, citing such observations as that the selling price of Canadian farm-products in the United States was not raised by the M'Kinley tariff, and that no reduction of the price of wheat, equivalent to the remitted duty, followed the repeal of the corn law in 1846. They also, without challenging the accepted doctrine of equivalence of imports and exports, hold that a tariff enables a country to control the character of its imports without lessening their volume, and that the effect of such control, as exercised to our detriment, has been seen in the diminishing proportion of fully manufactured goods in our exports, and the increasing proportion in our imports, to and from protected foreign countries.

The proposal of retaliatory duties met with considerable popular favour; but opponents were able to attach to the proposed new duties on food the odium of the old corn laws, and this repugnance was doubtless one of many causes contributing to the Unionist defeat of January 1906. In the Colonies, however, substantial progress has been made in the practice of preference. Tariffs giving preference to British goods have been adopted by New Zealand and by the five South African colonies. In Australia preference was delayed by the opinion, held by some statesmen who accepted the principle, that it was prudent to wait for a definite proposal from the mother country; but a beginning was made in 1906, and in August 1907 a tariff was submitted, giving preference to all manufactured goods made in Great Britain and imported in British ships. At the Colonial Conference of 1907 the representatives of Canada, Newfoundland, Australia, New Zealand, Cape Colony, Natal, and the Transvaal, unanimously reaffirmed the resolutions of 1902,—the Imperial Government alone dissenting,—and added a request for a preference

on articles already dutiable in the United Kingdom.

The Tariff Commission is a voluntary committee, including representatives of all leading industries, with Mr. W. A. S. Hewins as secretary, formed to examine the tariff reform proposals in the light of evidence collected from manufacturers and traders, and to prepare the draft of a tariff. The seven volumes of its report already issued deal with the following industries: vol. i. iron and steel; ii. textiles (in seven parts. 1, cotton; 2, wool; 3, hosiery; 4, lace; 5, carpets; 6, silk; 7, flax, hemp, and jute); iii. agriculture; iv. engineering; v. pottery; vi. glass; vii. sugar and confectionery. This report, based on a collation of the evidence, oral or written, of 15,000 witnesses, supplies much information respecting the actual facts of British trade, as well as statistics collected from many sources, and will be of great service to economists willing to submit their conclusions to the test of experience.

The publications elicited by the controversy have been many. The following may be mentioned as containing contributions of some permanent value to economical or statistical discussion:—By writers favourable to tariff reform: W. J. Ashley, *The Tariff Problem* (1903, 2nd. ed. 1904); *Progress of the German Working Classes*, 1904.—Sir V. Caillard, *Imperial Fiscal Reform*, 1903.—*Compatriots' Club Lectures*, ed. L. J. Maxse, 1905.—J. H. Schooling, *British Trade Year Book* statistical, 1905, 1906.—Rev. W. Cunningham, *Rise and Decline of the Free Trade Movement*, 1904; *The Wisdom of the Wise*, 1906.—Sir Roper Lethbridge, *India and Imperial Preference*, 1906.—L. S. Amery, *Fundamental Fallacies of Free Trade*, 1906.—J. W. Welsford, *The Strength of Nations*, 1907. By writers opposed to tariff reform: W. Smart, *The Return to Protection*, 1904.—A. C. Pigou, *The Riddle of the Tariff.—Protective and Preferential Import Duties*, 1903.—W. H. Dawson (Ed.) and other writers, *Protection in Various Countries* (series of vols.), 1904.—*Fact versus Fiction: the Cobden Club's Reply to Mr. Chamberlain*, 1904.—L. G. Chiozza-Money, *Elements of the Fiscal Problem*, 1903.—Lord Farrer, *Free Trade versus Fair Trade*, new ed. by C. H. Chomley, 1904.—P. Ashley, *Modern Tariff History*, 1904. C. A. V.

TITHES. In continuation of the article on TITHES in volume iii. the amount for the ten years which have elapsed since is given below. During this period the tithe has not continued to fall so rapidly as in the previous decade.

It will be seen that the price of wheat is now 51·9 per cent of its price in 1837. Barley is 75·5 per cent and oats 81·1 per cent. The tithe being £98 : 13 : 10 in 1837, and £68 : 19 : 6½ now (1907), is 70 per cent of its value seventy-one years ago.

The collection of tithe is sometimes now conducted under difficulties owing to the depression of agriculture. Thus an application was made to the High Court, in the spring of 1907, by a tithe owner to whom arrears of tithe on land in Chiddingfold, Surrey, which had previously gone out of cultivation, had been due from Oct. 1, 1904, to April 1, 1907, for a jury to assess the arrears and to define the land upon which the tithe was appointed. This finding of the jury was to go back to the High Court, by whom the land was to be handed over to the tithe owner who could cultivate the land. He was to keep an exact account of his transactions, and when he had obtained from the land the sum to which he was entitled, about £35, the land would revert to the owner. Such cases are rare, but that they should occur at all is illustrative of the condition of agriculture at the time mentioned.

The details are as follows:—

Table showing the average Prices of Wheat, Barley, and Oats, for Seven Years preceding each Year from 1898 to 1907, together with the value of a Rent Charge of £100 calculated at such Prices.

Years.	Average Prices per Imperial Bushel.						Value of a Rent Charge of £100.		
	Wheat.		Barley.		Oats.				
	s.	d.	s.	d.	s.	d.	£	s.	d.
1898	3	5¾	3	1	2	2	68	14	11
1899	3	5½	3	0¾	2	1¾	68	2	4¾
1900	3	4½	3	0½	2	1	66	15	9½
1901	3	4½	3	0½	2	0¾	66	10	9½
1902	3	5½	3	0½	2	1	67	3	8½
1903	3	6½	3	1½	2	2½	69	7	5
1904	3	6½	3	1½	2	2¾	69	19	6
1905	3	6	3	1	2	2¼	69	12	0¾
1906	3	5	3	0½	2	2¼	68	12	0¾
1907	3	5¾	3	0¼	2	2¼	68	19	6¼
						10	685	18	2½
General average for the 10 years, 1898-1907							68	7	9¾
General average for the 71 years, 1836-1907							93	16	1

TORRENS, COL. ROBERT (1780-1864). We may add to the article on Col. ROBERT TORRENS, vol. iii., the following remarks derived from Professor Seligman's "On some neglected British Economists":—

"A careful reading of his productions seems to justify us in making the following claims for Torrens:—

"In the first place, he discovered, independently of MALTHUS and RICARDO, the law of rent.

"Secondly, he advanced a theory of wages which was adopted by Ricardo.

"Thirdly, he discovered the law of comparative cost, the credit of which is usually ascribed to Ricardo.

"Fourthly, he advanced a theory of profits which differed from that of Ricardo, and which is considerably nearer the truth.

"Torrens first put forward the theory of the natural rate of wages as influenced by the standard of life, and it is this theory which soon became the stock in trade of the classical school.

"The doctrine of comparative cost has almost universally been regarded as one of the great achievements of Ricardo, yet not only the principle itself, but many of its applications, are found in Torrens."

The influence of Torrens on the opinions of Ricardo is very clearly stated by Mr. Cannan.

[Cp. Seligman, "On some neglected British Economists," *Economic Journal*, London, 1903.—E. Cannan, *A History of the Theories of Production and Distribution in English Political Economy from 1776-1848*, London, 1893.]

TRADE DISPUTES ACT 1906. See TRADE UNIONS AND STRIKES.

TRADE UNIONS AND STRIKES. The law relating to these subjects has been further defined and amended by the legislature since the original articles were written (TRADE UNIONS; STRIKES), and it is now expressly laid down by the Trade Disputes Act 1906: (*a*) that an act done in pursuance of an agreement or combination by two or more persons, if done in contemplation or furtherance of a "trade dispute," is not actionable unless the act, if done without any such agreement or combination, would be actionable; (*b*) that it is lawful for two or more persons, in contemplation or furtherance of a "trade dispute," to attend at or near a house or place where a person resides or works or carries on his business or happens to be, if they so attend merely for the purpose of peacefully obtaining or communicating information, or of peacefully persuading any person to work or abstain from working; (*c*) that an act done by a person in contemplation or furtherance of a "trade dispute" is not actionable on the ground only that it induces some other person to break a contract of employment, or that it is an interference with the business or employment of some other person, or with the right of some other person to dispose of his capital or his labour as he wills; (*d*) that an action against a trade union, whether of workmen or masters, or against any members or officials thereof on behalf of themselves and all other members of the trade union, in respect of any tortious act alleged to have been committed by or on behalf of the trade union, may not be entertained by any court, though the trustees of the trade union are liable to be sued in cases concerned with its property, except in case of any tortious act committed by or on behalf of the trade union in contemplation or in furtherance of a "trade dispute." And, for the purpose of this legislation, the expression "trade dispute" is defined as meaning any dispute between employers and workmen, or between workmen and workmen, which is connected with the employment or non-employment, or the terms of the employment, or with the conditions of labour, of any person. (Trade Disputes Act 1906.)

Now, inasmuch as the very large majority of these "trade disputes" are concerned with alterations in the rates of wages, it is an increasingly common practice with firms that can afford it to adopt some "profit sharing" or "copartnership" scheme in order to provide for the necessary fluctuations in earnings without altering the rates of wages at all, and to regulate those fluctuations so far as possible in accordance with some settled principle. One of the best examples of a successful experiment of this kind is afforded by the system of bonuses instituted by the South Metropolitan Gas Company in the year 1889, and continued to the present date (1907). That system consists in an adaptation of the statutory sliding scale, whereby the dividends of the shareholders are regulated, to the remuneration of the Company's employees. The bonuses payable under the scale, like the dividends payable to the shareholders, vary inversely as the price of gas to the consumer. Thus, if the price of gas stands at 2s. 9d. per 1000 feet, the employees are entitled to a bonus of 3 per cent on their annual salary or wages, if the price falls to 2s. 8d. per 1000 feet, they are entitled to a bonus of $3\frac{1}{4}$ per cent, and if it rises to 2s. 10d., they are entitled to a bonus of $2\frac{1}{4}$ per cent, and so on. One-half of the bonus is invested in the names of trustees in the Company's ordinary stock until the amount credited to the person entitled to it is sufficient to enable a stock certificate to be given to him in his own name, and the remaining half is left in the Company's hands to accumulate at interest, but may either be withdrawn at a week's notice or be invested in stock in the names of the trustees. There are at the present time about five thousand employee shareholders, who under the scheme have become entitled to more than one-thirtieth part of the capital of the Company, and, by an extension of its principles, are entitled to elect one-third of the directors from among their own number. The Board consists of nine directors, and three out of the nine are elected by the employees. In the particular instance of this Company, the profit sharers are non-unionists, but their wages are paid at the full trade union rate, so that they may be said to benefit to that extent by the existence of trade unionism elsewhere as well as by their own copartnership scheme, and in the case of most other profit sharing concerns, it is expressly provided that profit sharers are free to become or remain members of any trade or friendly society.

Palmer's *Company Precedents*, 8th ed. p. 879.

[See PROFIT SHARING; STRIKES; TRADE DISPUTES; TRADE UNIONS, vol. iii.; COPARTNERSHIP, Appendix.] T. G. S.

TRANSPORT (INLAND, OTHER THAN RAILWAY). The recent history of inland transport presents a startling combination of the new and the old. In some countries inland water transport is still of great importance. In

every country road motor traffic—practically the creation of the last half a dozen years—has already taken an important place.

Canals.—France and Germany still continue their policy of subsidising water navigation to compete with the state-owned or state-guaranteed railways, and if the subsidy is sufficient the water navigation can more than hold its own. To quote one instance: in the year 1900 there were carried into and out of Mannheim 7,000,000 tons of freight by water and 5,300,000 tons by rail. If, on the other hand, competition between the two modes of carriage is left free the result is different. In the same year 1900 there were carried into and out of St. Louis 700,000 tons of freight by water and 24,600,000 tons by rail. Yet, as natural waterways, the Mississippi and Missouri are hardly inferior to the Rhine and the Main. In England there is sitting at the present moment a Royal Commission on Canals to consider whether there is any future for inland water navigation in this country. One thing is already abundantly clear. Many witnesses are prepared to invest other people's money in canal navigations, but few seem to manifest any strong desire to invest their own. Quite apart from the general inability of artificial waterways to compete with efficiently built railways on equal terms, which experience seems to have proved sufficiently, there are two special difficulties in England. The first is, that as a result of two generations of highly efficient though possibly expensive railway service, the whole trade of the country is organised on the basis of small quantities of commodities delivered with great promptitude—traffic for which canals admittedly cannot compete. The second is that owing to the configuration of the country large numbers of locks are required. To work locks frequently implies either expensive pumping or very ample supplies of water at a high level, and the latter condition is certainly not generally prevalent.

Motors.—Motors are so new that it is difficult at present to forecast their future, but it is already evident that the prejudice against their use, strong though it be in many quarters, will not be sufficient, as it was when in 1828 they seemed on the verge of commercial success, to prevent their development. It is also already clear that for large volumes of traffic, whether in passengers or in goods, a road motor is not likely to compete in economy with a railway or even a tramway. The reduction in the cost of haulage on the smooth rail more than counterbalances the extra capital cost involved where that cost can be spread over a considerable volume of traffic. For sparse traffic the opposite applies; the working cost per unit of traffic is greater, but not so great as the combined working and capital cost where rails are laid down. But the carriage of goods, at least by motors, will always be handicapped in this country by the fact that though we have no mountains, we have also no plains, that the country has long been thickly populated, and that the roads have grown at haphazard instead of being laid out on a settled plan by competent engineers.

The London Traffic Problem.—The advent of the road motor coincidently with the conversion of the underground steam railways to electric traction, the opening of a number of new underground lines, and a large extension of electric tramways, has resulted in London in a somewhat acute financial problem. It is estimated that in 1906 about £47,000,000 invested in the provision of London passenger traffic facilities received an average rate of about ¾ per cent. The doctrine that public funds should provide free locomotion, as they provide free parks and libraries, has hitherto not found much acceptance, and there is a general agreement that means must be found to put an end to a financial situation that in the long-run is impossible. Two things seem necessary for this end: the one, common and harmonious action between all the different interests affected; the other, the establishment of a Board of Control on the lines of the Traffic Commission sketched out by the recent Royal Commission on London Traffic (*Report*, 1905-6, 8 vols.). The former at the time of writing seems likely to come into operation, but the latter requires legislation which so far the Government have not seen their way to introduce.

Tramways.—The controversy on the subject of municipal trading has raged with especial fierceness round the question of the operation—not the ownership—of street tramways. The logical system would appear to be that the municipalities should own the physical tramway, and maintain it as they maintain the rest of the street, but that the working, which implies technical and commercial qualities not necessarily found in elected town councillors, should be entrusted to private enterprise. And this was the system contemplated by the original Tramways Act of 1870. It is also the system that was recommended after exhaustive investigations both in America and Europe by a special commission appointed by the Massachusetts State legislature. It is, however, a *via media* that has not found general acceptance. In America the private companies own the rails as well as work the service. In this country, in almost all the great cities,—Edinburgh (where the Corporation owns, but a company works), Dublin and Bristol (where companies both own and work) are perhaps the most important exceptions,—the tramways are both owned and worked by the municipalities. It can hardly be denied that in technical efficiency and in quantity and quality of service given, the American private street railroads surpass

our municipally owned tramways, nor can it be denied that municipal pride and jealousy have in this country often interposed obstacles to desirable intercommunication between neighbouring cities which commercially minded companies would have avoided. On the other hand, *English* tramway policy has been free from the discreditable bribery and corruption that has been associated all along with the grant of street railway charters in the United States. (See MUNICIPAL AND GOVERNMENT TRADING, Appendix.) W. M. A.

THE TREASURY OF THE UNITED STATES. To us in England who regard the treasury simply as a customer of the Bank of England, the arrangements with regard to the management of the United States treasury appear strange and unsuited to the requirements of the country. Originally the accumulations of the treasury were stored up and kept absolutely disused. The result was that an immense supply of ready cash was withdrawn from active use. This led to great inconvenience when the harvest or other economic demands rendered it necessary that these funds should be used in the ordinary business transactions of the country. With a view to meeting these difficulties it was provided by the Act of 1863 that some of the money thus held might be deposited in the national banks, who were required "to give satisfactory security by the deposit of United States bonds and otherwise." This provision gave the Secretary of the Treasury great power, as it enabled him to make favourites among the banks by supplying them thus with deposits. The recent action of Secretary Shaw (1907) in this connection has not been approved. Professor A. P. Andrew, of Harvard University, wrote a very brilliant article on the subject in the *Quarterly Journal of Economics* (Boston, U.S.A.) for August 1907, which has subsequently appeared as a separate pamphlet. The rearrangement of the legislation regulating the Treasury has been at the present time (Jan. 1908) under consideration in the United States, but no immediate action appears likely to be taken.

["The Treasury and the Banks under Secretary Shaw," reprinted from the *Quarterly Journal of Economics*, August, 1907. See *Treasury Department of the United States*, and articles in London *Banker's Magazine*, August and October 1907.]

UNBIASSED ERROR (in Statistics). Statisticians are accustomed to distinguish two classes of errors in the collection or averaging of statistics, namely (i.) those which are more likely to be in one direction than in the other, whether of excess or of defect; and (ii.) those which, on the data to hand, are equally likely to be in the one direction or the other. Errors in wage-statistics due to class-bias, or errors in measurement due to a wrongly graduated measuring instrument, may be taken as examples of the former; errors in statements of daily wages due to a tendency to take the nearest round number (above or below the correct figure), or errors in measurement due to casual slips on the part of a number of independent investigators, as examples of the latter. Errors of these two kinds are called *biassed* and *unbiassed* errors respectively. It is clear that it is not possible to allow in calculation for unbiassed errors, but that they are, relatively to biassed errors, unlikely to matter much when an average is taken, as they will tend to cancel one another. In practice, therefore, unbiassed errors must be neglected, whereas biassed errors do not tend to eliminate themselves in the same way, and must be allowed for. On the other hand, when comparisons are made between similar sets of statistics, biassed errors matter less than unbiassed, since they are likely to affect each side of the comparison in the same direction, whilst unbiassed errors, though possibly less in absolute magnitude, are as likely to be in opposite directions as in the same direction.

UNEMPLOYED. It is important to distinguish between the unemployment of the efficient and industrious and the unemployment of loafers and the physically unfit, but it must not be ignored that the two classes are connected and that enforced idleness is demoralising. In the first class, in addition to the persons who cannot get any work, are those voluntarily out of work because they cannot earn the minimum wages at which they are prepared to accept employment. Because of the existence of the latter the "unemployment" returned by trade unions must not be taken to measure the deficiencies of the community in providing occupation for its members. No figures exist from which the distribution of unemployment in any country by capacity and character can be ascertained, but it has been found from analysis of the returns of certain London Distress Committees, under the Unemployed Workmen's Act, that 86 per cent of the applicants were unskilled, 56 per cent were casual labourers, 37 per cent owed their position to age, inefficiency, or bad character, 41 per cent were of indifferent efficiency and had an indifferent record, while 22 per cent were of good character and possessed good industrial records.

Unemployment which is not chronic owing to moral or physical defects may be classified into Cyclical, Seasonal, and what will be termed here "Residual." As the result of an investigation made by the Board of Trade (Cd. 2337, pp. 97 *et seq.*) a general idea may be framed of the fluctuations among trade unionists for the last fifty years. The range is greatest in the metal trades, because in bad trade the demand

for instruments of production collapses far more than the demand for other things. The fluctuations are found to be closely correlated with the cyclical trade movements. It is not easy to see how this periodic failure on the part of the community to make the most of its productive power can be repaired. Its effects may be counteracted in some degree by public authorities taking care that their demand for labour shall vary inversely rather than directly as the trade cycle, which is probably getting less intense. Much unemployment is caused by the fluctuating needs of the seasonal trades, but in these trades as a rule weekly wages are higher for the same quality of labour than they are in those which offer steadier employment.

By "residual" unemployment of "the employable," that among the industrially fit, which is still found even in good trade and good seasons, is meant. The reason for its existence is that industrial changes are always taking place in some degree, and necessitating continual readjustments of labour. Occasionally the rate of change is very rapid, and some labour in consequence may suffer great irregularity of occupation. Ordinarily, however, no severe shock is experienced by any class, and the change upon which the unemployment is a reaction, which may represent merely people moving to the work that suits them, is all to the good in the long-run.

The cause of this kind of unemployment may be termed the social "time-lag," by which is meant the average time intervening between the loss of one job and the discovery of another. This must be appreciable, because an operative cannot look for work while he is occupied; and when he is unoccupied it is doubtful whether he receives much guidance in his search unless he is a member of some well-organised trade union. It would appear to be highly important that efficient labour exchanges should in some way be brought into action. They are especially requisite for casual labour (*e.g.* labour at docks), as in the case of casual labour employment is most broken.

We shall now consider some recent attempts made abroad and in this country to diminish unemployment or mitigate its effects. The encouragement and development of insurance against unemployment has been widely recommended. Three schemes have been tried, viz. —(1) voluntary, or (2) compulsory insurance, both State-administered and subsidised by public grants or voluntary contributions, and (3) the subsidising under State direction of trade union unemployed insurance. On the first plan extensive experiments were carried out at Cologne, and it was found that the allowances paid were nearly double the receipts from premiums, one reason being that most of those who insured were liable to unemployment in a very high degree. In 1903 Leipzig followed the example of Cologne. The St. Gall (Switzerland) scheme is of the second type, *i.e.* it invokes the aid of compulsion. After two years' trial it was discontinued. It was found impossible to coerce people into insuring. One difficulty connected with both schemes is that persons liable to slight risks will object to paying the same premium as those subject to heavy risks, and very complex schemes are therefore requisite. A further difficulty has also been urged, namely, that unemployment is not properly an insurable risk, as the extent to which a person suffers from it depends in some degree upon the inconvenience it would cause. For this reason some have contended that it is best to subsidise trade union unemployment pay wherever it is possible, since the trade unions will see to it that their members are reasonably alert in applying for places, and reasonably capable of keeping them. There are, however, two leading objections to this solution: the one that independent schemes must be started for non-unionists, since otherwise a bonus is paid on unionism; the other that it would be almost impossible to prevent the subsidies from being used to support "strikes in detail" for standard wages and conditions. This matter of the standard rate crops up also in relation to independent insurance, and with it is associated the question of the kind of work which a man is not permitted to refuse. Friction with individuals and with trade unions may easily arise over these points, and it goes without saying that a labour exchange must almost inevitably be run side by side with insurance against unemployment in order to keep down the cost. The subsidising of trade union unemployed benefit has been tried in some places, and in France certain municipalities—*e.g.* Limoges and Dijon —assist all legally constituted local unemployment insurance societies. In France the Conseil Supérieur du Travail has recommended this course, and declared against a national compulsory system.

Labour Exchanges or Bureaux have been tried extensively, and more particularly in Germany, where they are frequently grouped in systems around central offices, which again are united. In Germany, in round numbers, about a million places a year are filled through the agency of these public offices, which constitute probably about one-fifth of the engagements actually made. In all other countries the percentage is much lower. The public registries in Germany are now arranged in seven big federations, and in connection with the registries many relief stations for those wandering in search of work are dotted about the country. In France the bulk of the work done outside private registry offices is shared between municipal offices and the Bourses du Travail, roughly in the proportion of one-third to two-thirds. Together they fill about

150,000 places a year. In France every commune with more than 10,000 inhabitants is compelled to maintain a public labour bureau, and power is given to the authorities to close private offices, providing compensation is paid to those instituted prior to 1904. In the United States the State unemployment offices fill about 100,000 places a year. In the United Kingdom labour exchanges have been comparatively insignificant. In the last three or four years, however, more enterprise has been shown, but still in 1905 the places filled probably did not much exceed 20,000, if indeed they reached that number. London is now leading the way with a centralised system of district offices, and much energy is being devoted to it. The step forward has been encouraged by the Unemployed Workmen's Act of 1905 (5 Edw. VII. c. 18). This is a tentative piece of legislation, which in effect empowers local authorities to make experiments. Any funds dispensed must be raised voluntarily, but the proceeds of a rate of ½d. in the pound—or even more, provided the sanction of the local Government Board is procured—may be spent on establishment charges (of labour exchanges, for instance), and for certain prescribed objects. Control is in the hands of distress committees, which must be instituted by defined authorities, and may be instituted by others. These committees are representative of Local Government Councils and Boards of Guardians, and contain co-opted members. It is too early yet to speak of their work. Grants have been made by the Government in proportion to the needs of places and the voluntary contributions raised locally, and a special fund instituted by Queen Alexandra (1906) has also been distributed. It is to be hoped that, as a consequence of the institution of these committees, the problem of unemployment will be dealt with more continuously than was usual in the past. The Local Government Board has not shown itself favourably inclined to the maintenance of labour colonies.

There are some labour colonies in operation in this country, but they are not so significant a feature of England as they are of Germany or Belgium. About 10,000 people are admitted to the German colonies in the course of the year, and there is accommodation in them for about 4000 at one time. There are between thirty and forty colonies in all, and they are now united in some degree in the Labour Colony Central Board. Hitherto the chief flaw has been the harbouring of loafers and vagabonds. They have been described as mere open-air casual wards, where lengthy residence is possible. Now attempts are being made to render them more reformatory. In Belgium the labour colonies have quite different objects. They are of two sorts: (1) the houses of refuge, and (2) the beggars' depôts. The latter are penal. They are a part of the policy adopted in 1892 of suppressing vagrancy and begging. The former were instituted for the less hardened offenders as a reaction against the severity practised in the latter. It appears to be the view of the authorities that these colonies are only slightly reformatory, and that their chief merit is in keeping the vagrant class of social parasites from preying on the community. Labour colonies will probably be found of most service (1) as penal, (2) as reformatory, (3) as aiding in restoring health to the physically unfit, (4) as assisting to agricultural occupations those who are suitable and desire work on the land. Each should be specialised to its end. They hardly touch the problems of seasonal, cyclical, or "residual" unemployment.

As regards statistics of unemployment of the leading countries, figures are returned by the trade unions. English figures alone, however, afford a sufficiently lengthy review for the course of unemployment to be gauged. According to trade-union returns it would not seem to have tended much either upwards or downwards in the last half-century. The distribution of unemployment by age, and the numbers out of work for different lengths of time, are stated for the Amalgamated Society of Engineers in the Board of Trade inquiry referred to above. Some ideas of unemployment may be gathered from the numbers on the books of labour bureaux, and the number of places offered. These may be supplemented in Germany by figures of membership of sick funds, as payments are not required from those out of work. There are also official returns as to days worked in certain industries, which are, however, very sparse for some countries. Unemployment is also returned in the French industrial censuses, and by the censuses of Massachusetts and Australia.

Authorities.—Only a few can be mentioned here. Official figures and reports are issued periodically or occasionally by most countries. Foreign experience has twice been reported upon by the English Labour Department, the last time by Mr. D. F. Schloss in 1906. Adler's article, *Arbeitslosigkeit*, in the *Handwörterbuch der Staatswissenschaften* of Conrad and Lexis, which concludes with a lengthier bibliography than could be attempted here, should be referred to. On insurance against unemployment there is a useful work in French by Cagninacci. Of works on Labour Exchanges special mention should be made of Conrad's *Organisation des Arbeitsnachweises in Deutschland* (1904) as one of the most recent, and the journal *Arbeitsmarkt*. Labour Colonies have frequently been described: Mr. Schloss' report, *The Continental Outcast* (by W. Carlile and V. W. Carlile), and Alden's *Unemployed Problem* (which deals with other matters also), may be referred to as useful recent material. There is also the journal *Der Wanderer*. A useful collection of facts and views will be found in

the Report of a Special Committee of the Charity Organisation Society on the relief of distress due to want of employment (1904). The Royal Commission on Poor Relief, etc., now sitting, is also considering the matter of unemployment.

S. J. C.

[See BOURSE DU TRAVAIL; BUREAU OF LABOUR; BUREAU OF LABOUR IN THE UNITED STATES; DEPRESSION OF TRADE; EMPLOYERS AND EMPLOYED; EMPLOYMENT; GOVERNMENT REGULATION OF INDUSTRY; INDUSTRIAL COLONIES; IRREGULARITY OF EMPLOYMENT; LABOUR DEPARTMENT; LABOUR EXCHANGE; LABOUR, MOBILITY OF; RESTRICTIONS ON LABOUR; STANDARD RATE (OF WAGES); STRIKES; TRADE UNIONS; TRUCK; WAGES; and in App. TRADE UNIONS AND STRIKES.]

WAGES, NOMINAL AND REAL, CHANGES IN, IN THE UNITED KINGDOM SINCE 1850. For the definition of these terms, see WAGES, NOMINAL AND REAL; for an outline historical view, see WAGES AND PRICES OF COMMODITIES, and WAGES, PURCHASING POWER OF; for the level of wages in 1886, see WAGES STATISTICS; and for wage changes in the United States, see WAGES, STATISTICS OF. The present article is concerned with such detailed information as exists for changes of wages and of retail prices in recent years. No complete authoritative statement can yet be given as to the course of average wages, and all generalisations must be taken as tentative, and viewed in the light of the partial material on which they rest. When the Wage Census of 1906 is published, a fairly complete comparison will be possible with that of 1886. The Labour Department of the Board of Trade has published monthly and annually since 1893 records of changes of wages and of standard time and piece rates (see STANDARD RATE (OF WAGES)). Other official publications contain accounts of changes of piece-lists and sliding-scale rates (see SLIDING SCALE (WAGES)), and historical records of Trade Union minimum rates are copious and increasing in number. The records of wages for certain large industries have been compiled and discussed by Mr. A. L. Bowley and Mr. G. H. Wood in a series of articles in the *Journal of the Royal Statistical Society*, and a general view of the progress in the half-century ending in 1883 has been given by Sir Robert Giffen.

Change in Average Wages.—The following table gives the general result of calculations as to the change in the *average wages of all employed* in particular industrial groups. The method used is similar to that for expressing the changes in the value of money by index numbers (see INDEX NUMBERS). For each group the average wage of the period 1900-04 is equated to 100, and the average wages of earlier periods are expressed as percentages. In the last columns the change of average wages in general, as indicated by these and similar estimates, is given. In all cases the numbers must be regarded as only approximate, especially over long periods; but where authorities disagree, or the evidence is incomplete, the number is either given as between limits, *e.g.* 65-70, or in brackets, *e.g.* (95).

Index Numbers of Change in Nominal *Wages for a Normal Week's Work. United Kingdom.* 1850-1904.

Period.	Agriculture.				Building.	Engineering and Shipbuilding.	Coal.	Printing (Time-rates).	General Average.	
	England and Wales.	Scotland.	Ireland.	Together.					Unweighted.	Weighted.
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1850-54	70	55-60	45-55	60	59	71	..	81		(55)
1855-59	75-80	60-65	50-60	65-70	65	75	..	81	1878-79 only	(60)
1860-64	75-80	60-65	65	65-70	68	75	..	81		62
1865-69	80	65-70	65-70	70-75	74	78	(65)	82	..	67
1870-74	90-100	80-85	75	85-90	79	83	90	86	..	78
1875-79	95-105	90-100	80-90	(95)	89	86	70	93	86*	80
1880-84	90	85	85	85	87	87	78	94	87	77
1885-89	87	85-90	88	85	88	87	72	94	86	79
1890-94	91	90	90	91	91	92	91	98	92	87
1895-99	94	(95)	95	94	96	96	84	98	93	92
1900-04	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*	100

NOTES.—Columns 1, 2, 3, 4 are based on *Stat. Soc. Journal*, 1899, pp. 552-570, and on Cd. 2376. No allowance is made for the increasing regularity of work in Ireland. Column 5 is based on *Stat. Soc. Journal*, 1901, p. 112, and Cd. 1761, p. 260. Columns 6 and 8 are based on *Stat. Soc. Journal*, 1906, p. 185, and 1899, pp. 709-711 respectively; column 8 only refers to compositors on 'stab rates, book and jobbing. Column 7 is mainly from Cd. 1761, p. 260, with reference also to *Stat. Soc. Journal*, 1895, pp. 270-72. Column 9 is from Cd. 1761, p. 260, continued to 1904 with the help of the Reports on Changes of Wages; it represents the unweighted (or simple) average of over 150 rates. Column 10 is from *The Economic Journal*, 1904, p. 459, and is ultimately based on a table in the *Stat. Soc. Journal*, 1899, p. 639, supplemented by the great bulk of the other evidence referred to in this article; the numbers represent the changes in general average wages, so far as they are known, allowing for the changes in the numbers employed in different industries.

The numbers in column 10 in this table give the tentative answer to the question, "What has been the change in average wages of the working population of the United Kingdom as a whole?" but certain important groups of industries (*e.g.* most of the clothing and food industries, domestic service, railways) are omitted, and it may be that their inclusion (if the necessary data are ever obtained) will modify the result. Theoretical considerations, both of the general equality of real efficiency wages, and of the principles of averages, however, suggest that an index based on a heterogeneous group of work-people of all grades of skill and age, and both sexes, is likely to be substantially correct for fully employed efficient labour in general.

The material for the textile industries is not sufficiently detailed for the treatment in the above table, though it has been allowed influence in columns 9 and 10. A fairly accurate comparison may be made as follows: men, women, lads, and girls are included:—

Average Weekly Wage of all Grades in Textile Industries.

	Cotton.		Wool.		Worsted.		Linen.	
	Rate.	Percentage Change.	Rate.	Percentage Change.	Rate.	Percentage Change.	Rate.	Percentage Change.
1886. Wage Census. C. 6889	15s.	79	15s. 6d.	86	12s. 3d.	87	9s. 10d.	86
1905-06. Returns to Labour Department	19s.	100	18s. 0d.	100	14s. 0d.	100	11s. 6d.	100

The average wage is, of course, greatly influenced by the number of women and children included, and a diminution in the latter has its effect on the rise shown. The average rise in this group is very nearly the same as that shown in column 10 above. It should be observed that, while in the coal industry the percentage changes, under the sliding scales or other agreements, bear a close relation to change of earnings, in the textile industries the changes in piece-lists have continually to be supplemented by other information, for the continually increasing efficiency of machinery increases earnings relatively to piece-rates.

Illustrative Statistics for particular Occupations.—In the tables given so far the rates of payment for particular occupations are merged in the average for industries. It is clearly impossible here to give wage-changes for all employments, but the following table shows the changes in detail for ten occupations, chosen so as to illustrate the varieties of the dates and amounts of increments of wages, and the stationariness of some rates as contrasted with the variability of others:—

Selected List of Wages, 1850-1906.

	For Normal Week.									Per Diem.
	Agriculture.			Engineering.			Building.		Printing.	Coal.
	Durham.	Lincolnshire.	Herefordshire.	London.	Tyne.		Liverpool.		Glasgow.	Lanark.
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
	Summer Wages.			Fitter.	Fitter.	Labourer.	Mason.	Bricklayer's Labourer.	Compositor.	Hewer.
	s. d.	s. d.	s.	s.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1850	12 6	10 0	8	..	21s.-24s.	13 0	27 0	..	25 0	2 9
1851	"	"	"	34	..	..	"	..	"	2 6
1852	"	"	"	"	..	..	"	..	"	"
1853	"	13 0	9	"	..	..	"	..	"	3 9
1854	13 6	15 0	11	"	..	..	28 6	..	"	4/ to
1855	13 6	"	"	"	..	..	"	18 0	"	5 0
1856	"	"	"	"	..	..	"	"	"	4 3
1857	"	"	"	"	..	..	"	"	"	4 0
1858	"	12 0	"	"	..	..	"	"	"	3 0
1859	"	"	"	"	..	..	30 0	"	"	"
1860	14 0	13 6	"	"	24 0	15s.-16s.	"	"	"	3 6
1861	..	"	"	"	"	..	"	"	"	3 2

Selected List of Wages, 1850-1906—*Continued.*

	For Normal Week.									Per Diem.
	Agriculture.			Engineering.			Building.		Printing.	Coal.
	Durham.	Lincoln-shire.	Hereford-shire.	London.	Tyne.		Liverpool.		Glasgow.	Lanark.
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
	Summer Wages.			Fitter.	Fitter.	Labourer.	Mason.	Bricklayer's Labourer.	Compositor.	Hewer.
	s. d.	s. d.	s.	s.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1862	..	13 6	11	35	24 0	..	30 0	..	25 0	3 1
1863	..	12 0	,,	,,	,,	..	33 0	..	27 6	3 7
1864	..	,,	10	,,	,,	..	,,	..	,,	4 0
1865	..	,,	,,	,,	25 0	..	,,	..	,,	4 1
1866	13 6	13 6	,,	36	,,	..	,,	..	,,	4 6
1867	14 6	15 0	11	,,	24 0	14s.–18s.	,,	18 0	,,	4 3
1868	14 8	,,	,,	,,	,,	,,	,,	..	,,	3 7
1869	14 6	,,	,,	,,	,,	..	,,	..	,,	3 7
1870	15 0	13 6	,,	,,	,,	..	,,	..	,,	3 9
1871	15 4	15 0	,,	,,	25 0	18 0	,,	..	30 0	4 6
1872	15 3	16 6	,,	,,	28 0	..	35 6	..	,,	7 0
1873	16 6	18 0	,,	,,	,,	..	,,	..	,,	9 11
1874	17 0	,,	12	,,	31 0	..	,,	..	,,	7 2
1875	16 6	,,	,,	,,	,,	..	36 8	..	,,	5 4
1876	17 0	,,	14	,,	30 0	..	37 1	..	,,	4 8
1877	,,	,,	,,	,,	,,	..	,,	..	32 6	4 2
1878	17 6	,,	,,	,,	29 0	..	,,	25 2	,,	3 2
1879	,,	15 0	13	,,	28 0	..	37 10	24 1	,,	4 6
1880	,,	,,	,,	,,	29 0	..	36 8	,,	,,	4 11
1881	18 0	,,	,,	,,	29 9	..	,,	,,	,,	4 6
1882	17 9	,,	,,	,,	30 0	..	,,	,,	,,	5 2
1883	17 6	,,	,,	38	32 0	..	,,	,,	,,	4 6
1884	18 0	,,	,,	,,	31 0	19 0	,,	,,	,,	4 1
1885	17 6	13 6	,,	,,	30 0	..	,,	,,	,,	3 11
1886	18 0	,,	12	,,	,,	18 0	,,	,,	,,	4 2
1887	17 10	12 0	,,	,,	,,	..	,,	,,	,,	4 2
1888	18 0	,,	,,	,,	32 0	18 0	,,	,,	,,	5 2
1889	,,	13 6	,,	,,	34 0	..	,,	,,	,,	6 2
1890	18 6	..	,,	,,	35 0	21 0	35 1	22 11	,,	
1891	19 0	15 0	,,	,,	,,	..	,,	,,	34 0	5 7
1892	,,	,,	,,	,,	33 6	20 0	37 1	,,	,,	6 2
1893	,,	13 6	,,	,,	31 6	..	,,	,,	,,	5 3
1894	,,	,,	,,	,,	,,	18s.–20s.	,,	,,	,,	4 9
1895	,,	,,	,,	,,	,,	..	,,	,,	,,	,,
1896	,,	,,	,,	,,	33 6	..	,,	,,	,,	4 10
1897	,,	15 0	,,	,,	35 0	21s.–27s.	39 2	22 8	,,	6 3
1898	,,	,,	,,	,,	36 0	..	,,	,,	,,	6 7
1899	,,	,,	,,	,,	,,	..	,,	,,	,,	8 1
1900	19 6	16 6	,,	,,	,,	..	,,	,,	,,	6 4
1901	20 0	,,	,,	39	,,	22 0	,,	,,	,,	6 1
1902	,,	15 0	,,	,,	,,	..	,,	,,	,,	5 8
1903	,,	,,	,,	,,	35 0	..	,,	,,	,,	,,
1904	,,	,,	,,	,,	,,	22 0	,,	,,	,,	,,
1905	..	..	..	,,	,,	21 6	,,	,,	,,	,,
1906	..	..	..	40	36 0	22 0	37 2	,,	,,	,,

NOTES TO TABLE.—Columns 1, 2, 3 are from the *Second Report on Earnings of Agricultural Labourers*, Cd. 2376, pp. 173, 197, 210. The wages are consecutive records from three farms. In Durham house and garden are free, and there are minor allowances in Durham and Hereford; no material change occurred in this respect during the period taken. Columns 4, 5, and 6 are compiled from *Stat. Soc. Journal*, 1905, pp. 109-125, 584-5; the wages stated for fitters are mainly the standard *minimum* rates, those for labourers are from divers sources and are not strictly comparable. Columns 7 and 8 are mainly from *Stat. Soc. Journal*, 1909, pp. 306-7; labourers' hourly wages were raised from 5d. to 5½d. in 1893, and the hours per week reduced from 55 to 50 in 1893, and to 49½ in 1897. Column 9 comes from *Stat. Soc. Journal*, 1899, pp. 709-11, brought up to date; the wages are for ordinary day work. Column 10 is from Bowley's *Wages in the United Kingdom*, pp. 104-7, the last eight years being computed roughly. It is to be observed as to columns 4 to 9, that the number of hours per working week has fallen considerably in the period, so that rates per hour have risen more rapidly than the rates shown in the table.

Change in purchasing Power of Wages.—To compute the change of real wages it is necessary to know the changes of retail prices (PRICES, HISTORY OF), and to show their effects on the purchasing power of wages with the help of detailed statements of expenditure (WORKMEN'S BUDGETS). There are no adequate returns of retail prices, except in the case of bread in quite recent years. The Board of Trade (H. of C. 321 and Cd. 2337) has brought together much information, but of a heterogeneous nature; it is doubtful whether their final index numbers can be safely used except to show the course of the general semi-wholesale price of food in London since 1877. It is noticeable that this so-called retail index number follows very nearly the

same course as that showing wholesale prices, and we may therefore be justified in carrying it back to 1850 by the help of Sauerbeck's index number for wholesale food prices. After food the principal expenditure of the workman is on rent, and there is a general impression that workman's rent has risen, even relatively to the accommodation provided, an impression possibly justified by the rise in ground-rent and rates.

As a working hypothesis, it seems reasonable to assume that the sum remaining in the workman's hands, after food has been purchased, has not varied greatly in purchasing power, the general fall in prices being counterbalanced for this residuum by the rise in rent and in the cost of personal services. We may further assume, without serious error in the result, that two-thirds of wages are on the avreage spent on food, though the proportion has no doubt fallen in the last half-century. The result is not to be regarded as final in any sense, but rather as showing the direction of the effect of the change of prices, *i.e.* the nature of the numerical relation between nominal and real wages.

Hypothetical Conversion of Nominal into Real Wages.

Periods.	Index Nos. of Nominal Wages from previous Table. 1.	One-third of Col. 1 assumed unchanged in Purchasing Power. 2.	Two-thirds of Col. 1. 3.	Index No. of Food. 4.	Purchasing Power of Two-thirds of Col. 1. 5.	Sums of Cols. 2 and 5. 6.	Col. 6 in round numbers. 7.
1850-54	55	18	37 ÷ 1·21	= 31		49	50
1855-59	60	20	40 ÷ 1·40	= 28		48	50
1860-64	62	21	41 ÷ 1·36	= 30		51	50
1865-69	67	22	45 ÷ 1·40	= 32		54	55
1870-74	78	26	52 ÷ 1·47	= 35		61	60
1875-79	80	27	53 ÷ 1·41	= 37		64	65
1880-84	77	26	51 ÷ 1·32	= 38		64	65
1885-89	79	26	53 ÷ 1·06	= 50		76	75
1890-94	87	29	58 ÷ 1·02	= 57		86	85
1895-99	92	31	61 ÷ ·95	= 64		95	95
1900-04	100	33	67 ÷ 1·00	= 67		100	100

Index numbers of real wages.

The following table, put less definitely, and carrying the record farther back, is probably substantially correct:—

General View of the Course of Prices, and of Nominal and Real Wages in the United Kingdom.

Periods.	Nominal Wages.	Prices.	Real Wages.
1790-1810	Rising fast	Rising very fast	Falling slowly
1810-1830	Falling	Falling fast	Rising slowly
1830-1852	Nearly stationary	Falling slowly	Rising slowly
1852-1870	Rising fast	Rising	Rising considerably in the whole period
1870-1873	Rising very fast	Rising fast	Rising fast
1873-1879	Falling fast	Falling fast	Nearly stationary
1879-1887	Nearly stationary	Falling	Rising
1887-1892	Rising	Rising and falling	Rising
1892-1897	Nearly stationary	Falling	Rising
1897-1900	Rising fast	Rising	Rising
1900-1904	Falling a little	Falling and rising	Stationary

If the view shown in these tables is correct, it follows that in the period 1880-1900 real wages have on the average progressed with unexampled continuity and rapidity.

[See Bowley, *Wages in the United Kingdom*, and *National Progress in Wealth and Trade*, and *Stat. Soc. Journal*, 1895, 1898, 1899, 1900, 1901, 1902, 1905, 1906; and *Econ. Journal*, 1904, p. 459.—Giffen, *Essays in Finance*.—Wood, *Econ. Journal*, 1901, p. 151.—C. 5172, *Returns of Wages between 1830 and 1886*.—C. 5807, C. 6161, C. 6455, C. 6715, and C. 6889, viz. *The Wages Census of 1886*.—Cd. 346 and Cd. 2376, *Wages of Agricultural Labourers*.—C. 7567 I. and Cd. 144, *Standard Piece Rates*.—C. 7567 II., Cd. 317, Cd. 3245, *Standard Time Rates*.—C. 7567 and annually, *Changes in Rates of Wages*.—Cd. 1761, Mem. XIX.—Cd. 2337, Mem. I. and II. (see criticism *Stat. Journal*, 1905, p. 176).—H. of C. 321, *Wholesale and Retail Prices*.—See also "Bibliography of Wage Statistics," *Econ. Review*. Oct. 1898.] A. L. B.

WELLS, DAVID AMES (1827-1898). Born in Springfield, Mass.; died in Norwich, Connecticut. Graduated from Williams College in 1847, and from the Lawrence Scientific School, Cambridge, 1851. He was engaged in scientific pursuits, principally in chemistry, until the outbreak of the Civil War, and published several widely used manuals, like *The First Principles of Geology*, *Principles and Applications of Chemistry*, and *Natural Philosophy*, the last of which went through fifteen editions by 1874.

At the outbreak of the Civil War Mr. Wells became interested in economic questions, and in 1864 delivered a lecture in Troy, New York, entitled *Our Burden and our Strength*, devoted

to the resources and the tax-paying abilities of the United States. It was at first privately printed, but attracted wide attention, and was then published by the Loyal Publication Society of New York. It became one of the most noted publications of the war period, and no less than 200,000 copies were issued, being also translated into French and German. It was a time when confidence in the United States Government was at a low ebb, when the greenback was depreciated almost 50 per cent, and when the United States bonds had sunk nearly as low. Many were full of apprehension at the prospect of further issues of paper money, of enormous loans, and of crushing taxation. It was now that Mr. Wells endeavoured to prove that the nation's credit was still unimpaired, and that a wise use of the resources of the country would tide it over all possible dangers. As a result of this monograph President Lincoln, on the recommendation of Mr. Fessenden, Secretary of the Treasury, appointed Mr. Wells on the National Revenue Commission, together with Stephen Colwell of Pennsylvania, and S. S. Hayes of Illinois. Their report of 1866, written by Mr. Wells, contained recommendations which were made the basis of subsequent important legislation. A few months later the office of Special Commissioner of Revenue was created, and Mr. Wells was appointed to this office. His successive reports have become classics on the subject. It was during this period that Mr. Wells was converted from protectionism to free trade, and his energetic advocacy of free trade in the report of 1869 caused President Grant to abolish in 1870 the position of Special Commissioner of the Revenue, but not until after Mr. Wells had made the most valuable suggestions as to the reform of the internal revenue, most of which were enacted into legislation. Perhaps the most important single change was his suggestion of the use of stamps for the collection of taxes on spirits, beer, and tobacco. He also created the Bureau of Statistics, and called to its head General Francis A. WALKER.

When Mr. Wells retired from his office at Washington, Governor Hoffman of New York offered him the chairmanship of the New York State Tax Commission. The two reports of this commission, published in 1871-72, were written by Mr. Wells, and were the first thorough investigation of local taxation in America. Mr. Wells devoted the rest of his life to study and writing on economic topics, his chief books being his *Our Merchant Marine*, 1882, devoted to a study of the decline of American shipping; his *Practical Economics*, 1885, dealing primarily with tariff problems and questions of internal revenue; his *Recent Economic Changes*, 1898, which was an attempt to show that the industrial depressions since the Civil War were not due to scarcity of money, but that the changes in price were due to alterations in the conditions of production of the commodities themselves; and, finally, his *Theory and Practice of Taxation*, 1900, in which he summed up his life-work, on the question of direct taxation. Mr. Wells' reputation as an economist is due primarily to his marvellous capacity for using facts and statistics, and to his wide acquaintance with the actual phenomena of economic life. He had, however, never enjoyed the advantages of a scientific training in the theory of economics, and he was by no means so strong in his discussions of general principles as he was in his treatment of particular problems. He was the chief American advocate of the principle of general diffusion of taxes.

The various aspects of the public and scientific activities of Mr. Wells are treated in the Report of a Memorial Meeting of the Economic Conference of the Johns Hopkins University, November 22, 1898. His chief writings are as follows:—

Our Burden and Our Strength, 1864.—*Reports of the Special Commissioner of the Revenue*, 1866, 1867, 1868, 1869.—*First and Second Reports of the Commissioners appointed to Revise the Laws for the Assessment of Taxes in New York*, 1871-1872.—*The Relation of the Government to the Telegra*, 1873.—*The True Story of the Leaden Statuary*, 1874.—*The Relation of the Federal Government to the Railways*, 1874.—*The Cremation Theory of Specie Resumption*, 1885.—*Robinson Crusoe's Money*, 1876.—*Contraction of Legal Tender Notes* vs. *Repudiation*, 1876.—*Plain Talk with a South-western Inflationist*, 1876.—*The Silver Question*, 1877.—*The Sugar Industry in the United States and the Tariff*, 1878.—*Why We Trade and How We Trade*, 1878.—*How the Bankers and the Public deal with a Great Revenue and Industrial Problem* (The Sugar Question), 1880.—*Our Merchant Marine*, 1882.—*Free Trade Essential to Future National Prosperity and Development*, 1882.—*Practical Economics*, 1885.—*A Primer of Tariff Reform*, 1885.—*Relation of the Tariff to Wages*, 1888.—*Recent Economic Changes*, 1898.—*Theory and Practice of Taxation*, 1900.

E. R. A. S.

WORKMEN'S INSURANCE. Workmen's insurance may be classified into insurance against accident, sickness, invalidity, and old-age (see PENSIONS, OLD-AGE). Germany first introduced the principle of making the cost of accidents a charge upon industry in 1881, and provided that industries should be grouped in associations upon which the burden should fall. The object of the associations was to protect the workmen against the failure of the employer to meet his liabilities. The new principle was adopted in France in 1898, and modified in 1902. In France, however, owing to difficulties in the way of providing compulsorily for associations of industries, the obligation to compensate was imposed on the employer, the State affording some additional protection to the workmen by guaranteeing certain parts of

[redacted] teed [redacted] but in [redacted] English system reduces to the Germ[redacted] by firms voluntarily insuring as a rule when they are not strong enough to bear the risks themselves. England began her new course in 1897, and embarked further upon it in 1900 and 1906. Now, in addition to industrial workers and clerks with small incomes, even domestic servants are brought under the law. The new laws, in attaching the cost of accidents directly to the expenses of production, should stimulate the provision of safety appliances. Insurance should not check this effect, as insurance companies will regulate their premiums according to the precautions taken. It is feared by some that workmen may be rendered more careless, and that "malingering" will be encouraged. Statistical evidence is not convincing one way or the other. The laws of all three countries provide for weekly allowances in the case of non-fatal accidents and for lump payments to dependants in the event of death. In France and Germany medical treatment is also provided, and in the latter country an injured person may be compelled to undergo a cure. The new principle for compensating accidents has not been introduced into the United States—where, however, the law on the old English plan is administered very favourably to the workmen—but it has already won its way into many other countries.

Compulsory insurance against sickness in the case of the wage-earning and similar classes was adopted in Germany in 1883. Existing insurance institutions were generally recognised and new offices were established to supplement them. Generally speaking the premiums are divided between work-people and employers in the ratio of two-thirds to one-third. Sick relief may continue for as long as twenty-six weeks. Thereafter, if needful, an invalidity pension is paid under the scheme for old-age and invalidity pensions (see article on PENSIONS, OLD-AGE). In England, France, and the United States, to cite the three other leading countries, sickness insurance is still on a voluntary basis, though the French Government has for years subsidised and encouraged private enterprise in this matter, and the English Government accords certain privileges to such friendly societies as consent to register.

Authorities.—Willoughby, *Workmen's Insurance* (now a little out of date); Lass and Zahn, *Einrichtung und Wirkung der deutschen Arbeiterversicherung* (third ed. 1904); Memorandum of the Home Office on Foreign and Colonial Laws relating to Compensation for Injuries to Workmen (Cd. 2458), 1905. S. J. C.

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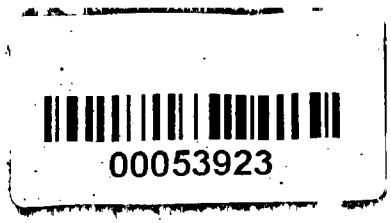

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